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Composition and Cultivation of Clay Lands.

The earthy substance known as alumina or argil, forms a most important part of the materials of the earth. It exists nowhere in a pure or uncombined state, and when procured from alum, of which it forms the base, it is a light, white powder, very soft and spongy. It is distinguished in a peculiar manner, by forming a tenacious and ductile paste, when mixed and kneaded with water, and whenever it is found in soils to any considerable extent, it imparts to them this quality in an eminent degree.

The substances nearest approaching to pure alumina, are the argillaceous minerals, some of which are among the most beautiful of Creation's gems. A large class of these known as *perfect corundum*, possess a hardness and density, only inferior to the diamond, and are classed by the lapidary, according to their various colors. The red, constitutes the oriental ruby; the blue, the sapphire; the yellow, the topaz; the purple, the amethyst; the green, the emerald; and the yellowish green, the chrysolite. Of these, the sapphire analysed by Klaproth, was found to contain 98.5 of argil, 1 of oxide of iron, and 5 of lime. The ruby afforded 90 of argil, 7 of silex, and 1.2 of iron. Emery, a more extensively diffused mineral, and of general use in the arts, is composed of 86.5 of argil, 3 of silex, and 4 of iron. Mica, an invariable constituent of granite, has 30 to 35 per cent. of alumina; and hornblende, which combined with feldspar and quartz, constitutes sienite, has 12 to 14 per cent. Basalt, forming an extensive mass of rocks, has 16 per cent. of alumina; clinkstone and wacke have a large proportion; argillaceous slate, extensively disseminated, has 26 per cent; and whet slate, or honestone, of a splintery character; and drawing slate used as tiles; alum slate, from which alum is extracted; and bituminous shale, each contain large quantities.

In the disintegrated form in which alumina exists in combination with other earths, *porcelain clay* contains a greater amount than any other substance; Wedgewood having found it in Cornwall, Eng., to contain 60, combined with 20 of silex. Generally however, it has not over 42 to 48, with silex 52 to 58. The strongest *agricultural* or *pipe-clay*, consists, according to Johnstone, of 36 to 40 of alumina, with 52 to 56 of silex, 3 or 4 of oxide of iron, and a trace of lime. *This*

is generally called pure clay. The constituents of which it is composed are *chemically* united in most cases; that is, so combined that they cannot be separated by washing or other mechanical means.

The *strongest clay soils*, which brings us to the practical part of our subject, consists of the last mentioned clay, with 5 to 15 per cent. of silecious sand, *mechanically* mixed, which admits of separation by boiling, when the sand settles, and the clay, which remains suspended in the water, may be poured off. A *clay loam* has a still larger proportion of sand, 15 to 30 per cent., which can be separated as above, and which renders the soil more loose and friable. *A loamy soil* has 30 to 60 per cent. of sand; a *sandy loam*, 60 to 90 per cent.; while a *sandy soil* has not over 10 per cent. of *pure clay*, which, it must be borne in mind, though called pure clay, contains only 36 to 40 per cent. of alumina.

The distinguished characteristics of clay soil in an agricultural point of view, are their great tenacity, which renders their separation by the plow and other implements, more difficult than such as have a larger proportion of sand; and when so divided, they do not crumble and separate into minute particles, except under peculiar circumstances. They have a strong affinity for water, holding it in great excess after rains; and their texture is such, as to prevent the easy escape of the surplus, so desirable, and even necessary, to the most successful cultivation and growth of vegetable life. These are objections that attach to all clay soils, in their unimproved condition. They are inherent in their nature, and inseparable from their constitution, wherever found, or however existing. These deficiencies are still further augmented when they occupy a level position, as many of them do. To rid them of their surplus water is the great object to be accomplished, and if this be effectually done, all other difficulties vanish. In Scotland and England, where they have a large proportion of this kind of land, which is more highly esteemed than any other, for wheat and other of the most valuable crops, they have, as is well known, adopted to a considerable extent, *a system of thorough under-draining.* We have received in the last No. of the Lond. Farmer's Mag., the details of this system, from Mr. Smith, of Deanston, which we shall give at length hereafter, if we can find room, as containing the latest and fullest intelligence on this most important practice; and, for the present, content ourselves with extracting from the Jour. of the Roy. Ag. Soc. the details of an effectual system of draining, so cheap as to be within the reach of every one where the materials are to be had conveniently. They are from the pen of Rev. G. V. Holcomb. He says:

"The land is drained with dried turf, procured for the purpose from the fens, similar in appearance to what used to be consumed instead of coal in the cottages; the length varies from 12 to 16 inches, according to the goodness of its quality, some being more brittle and more easily broken in carriage than others; the width and depth of the best turves is about 3 inches; the retail price is now 7*s.* per thousand: 4 horses in a wagon easily bring 3000. Supposing the drain to be a rod, *i. e.* 5½ yards, asunder, the usual distance, 2000 turves amply suffice for one acre of land; the durability of the drainage depends upon the soundness of the clay, the depth in the earth at which the turf is buried, and the goodness of turf, which varies in different parts of the fen. I have myself been a tile-maker for my own consumption, and used many thousands, but after twenty years of practical experience of tile and turf, prefer the latter; it is two-thirds cheaper than tiles, and, where sheep-folds are set, not so liable to have the drains broken in, the turf giving way to the drift, whereas the tile breaks and the earth follows. I now cut across the old tile-drains to make turf ones in opposite directions, and deeper in the ground. The tile-drains are frequently found to be destroyed—rats, rabbits, moles, or narrow wheeled carriages passing over them are all injurious. Turf is found to be sound which has been laid 16 years, but it pays well to renovate the drains every eight seasons. The *shape* of the drains corresponds with the turf. I send a slight sketch. The first operation is with a double-breasted plow, which makes a deep impression in the land: the laborer then takes a shovel to clear out the loose earth; afterwards he uses the spade; lastly he uses the land-ditch tool, with which the lower part of the drain is excavated to the depth of twelve inches more: the width of this aperture is about 3 inches at the top, and is gradually reduced by the shape of the implement to one at the bottom. The drain is perfectly cleared by a drawing tool or hoe. The turf is then pressed into the drain by the foot to its depth, which is about 3 inches, leaving an open course for the water of about 9 inches deep underneath; when expanded by moisture, with the earth filled in open, it will bear any weight of horse or cart. The party of men who under-

take the job, generally carry to the field a small iron drift, with which they break or remove any stone that may interrupt the spade; if a large one they dig it out, filling the space with clay out of which the drain is formed for the turf. A little boy or girl, from six to eight years old, commonly attends each drainer, with a tin mug, often an old powder tin, attached by a bit of string to the end of a stick, and filled frequently with water out of a pail, with which the child follows the spade, and by pouring it out when necessary, loosens any stiff piece of clay or earth; when not wanted, the boy shovels out the moulds, previous to the operation of the spade, or collects the stones cast out, for which he is paid per load. The price of draining, varies from 3*s*. 6*d*. to 5*s*. per score rod, including boy's wages; a good hand will execute 1¼ rods, some more in the day. Sometimes 2, or even 3, spades' depth is taken out to get a proper level, or to penetrate the clay, when the price of course rises in proportion. If the shoulders of the drain give way in a gravelly or galty place, bushes or stubble are placed under the turf, which is doubled to fill a larger aperture."

According to the above plan, having the drains within one rod of each other, there will be required 160 rods of ditch or drain on an acre, and this at the above highest estimate, costs 5*s*. for every 20 rods, or 40*s*. per acre, or a little exceeding $9. If we double this amount, to cover the extra price of labor in this country, for the cost of this species of draining, we have less than $20, as the expense of putting an impracticable, clay soil, in a condition of yielding for 20 years, or more, the greatest quantity of produce, with much less preparation than is now required. This surely is a system that will justify adopting, wherever lands are so valuable as to render a moderate augmentation of their products an object. We are not advised of the increased value of thorough drained clay lands in this country; but though our hotter summers and drier atmosphere would probably render the difference effected by draining much less here than in England, yet there is no doubt, that the increase in crops and saving in labor, must be very great. Till we have details of the effect of such draining in this country, it would be presumptuous to state, at what price per acre this improvement would be justified. The value of an 18 years' lease of land, before draining, was estimated by Mr. Smith at less than 6*l*., while the same lease, after thorough draining, is estimated by him to be worth more than 64*l*.; or over ten to one in favor of the land which had been drained. Such results, which have been experienced in Great Britain, will warrant ample trials among the intelligent agriculturists of America. We shall be most happy to receive, and give publicity to any well conducted, and accurately noted experiments made in this country, if any such exist.

We are confident that the inventive genius of our countrymen could easily devise some practical application of steam power, to ditching extensive, level lands, while the surface is firm and compact, during dry weather, so as to reduce the expense perhaps below the cost in Europe; and when this is accomplished, the principal obstacle to introducing this greatest agricultural improvement of modern times, will be removed. This system is, beyond all doubt, the only one approximating perfection in the tillage of heavy clay land.

A plan for under-draining, has been, to some extent, adopted in England, which is done entirely by horse or ox power, by attaching a pointed iron spindle of about 3½ inches diameter at the largest end, to a sharp coulter, which reaches to the required depth below the surface, say 20 to 30 inches. This requires a very strong team of 6 or 8 powerful horses, when the work is done with great facility, by simply carrying the spindle through the subsoil in a horizontal direction, attached to the lower end of the coulter. The adhesiveness of the clay effectually closing over the drain made by the spindle, is said to leave a permanent passage for the water for years; but as this system has not been extensively adopted in England, we may conclude it will hardly justify a trial here.

Our principal object at the present moment, is to give some general directions for cultivation of clay lands, as they are usually found in this country, which are the results of long continued, skilful practice, of the best farmers. The most desirable improvement would be, to alter the texture of this description of land, by the addition of a quantity of sand and gravel so as to modify the tenacious character of the clay. This plan, however, like that of under-draining, is too expensive for this country, except in the neighborhood of cities, where land is sufficiently valuable to justify the cost; and improvement in this way, must be confined to such lands, or small patches elsewhere, where sand is convenient for the purpose.

Another mode of improvement, which to

a certain extent, is within every farmer's reach, and is one of the legitimate objects of every good farmer's system, is to add large quantities of coarse, unfermented manure, and all his undecayed vegetables; which may be done on a large scale, by turning in matured crops produced upon the land. There is no danger of putting on too much manure of this kind, if buried sufficiently deep, in proportion to the quantity used. And there is as little danger of suffering any loss of the manure. It will last till exhausted by the growth of vegetation. Nor will it *burn* the land, according to the common phrase, as an excess of manure does on light and sandy soils. It is not carried away by rains, or evaporated by heat, but like coin, securely hoarded in a strong box, it is safely retained till the owner's key is applied to unlock it. The mechanical, as well as chemical character of this soil, particularly adapts it to the preservation of manures; for in addition to its strong chemical affinity for ammonia, which is the fertilizing principle in all soils, its mechanical structure enables it to hold beyond the possibility of escape, all the animal and vegetable substances buried beneath it.

After doing whatever can be effected advantageously towards altering its character as above described, the next process is to put the surface into the right shape. This should always have some descent, sufficient to enable the water to pass off freely. When the natural surface has not declivity enough to effect the object, the land must be thrown into beds of 10 to 20 feet wide, with a deep, double furrow between each, to conduct off the water, which falls from the more elevated surface; and the water accumulated in these furrows, should be led away through some natural ravine or artificial ditch.

For all grain crops to be sown in the Spring, the land should be plowed the preceding fall. The following spring, the grain may be sown directly upon the surface, and harrowed in and rolled, without allowing the plow to touch it. By this operation, we have the bed, in which the grain is to nestle, and from which it is to draw its future support, more finely divided by the elements, and the action of frost through the winter, than can be done by any instrument whatever, and no alteration of this handiwork of nature can be made but for the worse.

If corn or roots are required, the land should be *half* plowed the previous fall; that is, a space should be left unmolested, of the width of a furrow, on which the upturned furrow is thrown. By this operation, a large dry surface is exposed to the salutary effects of air and moisture, heat and frost; and it will be in the best possible condition for early tillage, and abundant crops. It will be mellow, friable, and comparatively dry, and by thorough cross-plowing, harrowing and rolling, in the spring, it will be well fitted for the reception of the seed.

Of the immense capabilities of good clay soils, we have never been more favorably impressed than during the last and present seasons. While surrounded by scorched fields and withered crops, during the excessive drought of last year, our own crops of every kind, on a tenacious clay, were sufficiently supplied with moisture, and were never heavier and better. The present summer has been one of excessive rains, yet when the land was well supplied with manure, and properly laid up, the yield has been peculiarly good. The long continued cold of the spring was unfavorable to many crops, yet after a thorough examination, during the summer, of those growing on every variety of soil, over an extent of several hundred miles, we have no where seen them better, or more abundant, on any land in no higher condition.

For *winter wheat*, we do not think them suitable, unless prepared by thorough underdraining, as the wheat is very generally winter killed, or thrown out by the frost, or drowned by excessive rains, before the sun gets sufficiently high to protect it. But with the best varieties of spring wheat, it produces largely. For the production of rye, it is totally unsuited; but of barley, oats, peas, grass and roots, when suitably prepared, no soil produces better crops. Their chief value, however, is for grass lands, and when properly put down in meadow, they ought never to be disturbed, as with good management, they will be in a constantly improving state, and afford the most profitable and remunerating returns. But while in this condition, no animals should ever be suffered to graze them, and especially while the ground is soft. Poaching is destruction to them, and no scarcity of other food, will justify the farmer in driving his cattle upon his meadows, while saturated with water. It is a common opinion by those unaccustomed to them that clay lands will not produce good clover; yet we have never seen better clover, or larger crops, than we have repeatedly raised on them.

When required for roots, corn, or other hoed crops, the soil should be well charged

with manure, and the most thorough tillage will be amply repaid. "A little land well tilled," has a peculiar signification when applied to this kind of soil. Plaster, (sulphate of lime) has no appreciable effect on it when applied in small quantities; and lime, (carbonate of lime,) has less than on any of the lighter soils. Ashes are valuable on any land, and we believe, under all circumstances; yet we have repeatedly made the application of them on a very stiff clay, without deriving any immediate perceptible benefit. A longer time is required under certain circumstances, for them and other manures to act, but their action continues through a much longer period.

Different varieties of Wheat and its Cultivation.

In an interview we recently had with General Harmon, of Wheatland, Monroe Co., he communicated some important facts, from his own experience, on the culture of the different varieties of wheat, and as this kind of practical information is what we deem most valuable for our readers, we shall give the substance of his remarks, with such additions as we deem particularly deserving attention.

The kind of wheat General H. has been cultivating with great success for the last few years, is what he calls the *improved Flint*. It was first introduced into Western New York, in 1822. It is peculiarly hardy, withstanding the effects of winter remarkably well. When first introduced, it was exceedingly subject to lodging, but the effect of culture has tended to remove this difficulty, and the straw has become sufficiently strong to sustain the weight of the grain till cut. The heads also were at first short, but they have become longer and heavier by careful cultivation. The wheat is very plump and white, and the flour will produce a greater quantity of bread than any other kind he cultivates. It yields from 20 to 25 bushels per acre, with ordinary attention, and averages 63 lbs. per bushel. It is less liable to rust than any other kinds, excepting the Kentucky white beard. The berry is retained in the head with more tenacity than any other wheat, which is an important item with extensive wheat-growers, who cannot of course, cut and secure all their wheat just at the time it is best fitted for harvesting. When wheat was threshed with flails, this peculiarity was a great objection; but the introduction of threshing machines since, has entirely obviated it. This variety he esteems the most highly, and he raises from 1000 to 1500 bushels of it annually, allowing no other kinds to come in contact with it, either in the field, ricks, or granary. The greater portion of his crop is sold as seed wheat, for which, he charges two shillings per bushel above the selling price of ordinary grain, which intelligent farmers consider low enough for an article, that in addition to its being the best of its kind, they are certain is free from all mixture with other varieties, smut, chess, cockles, &c.

The *old Genesee Red Chaff*, a bald white wheat, he considers the next best. This was introduced into Clinton, Monroe Co., in 1798, and till 1820 was the leading and favorite crop. Since that time, however, it has been peculiarly liable to rust and blasting; yet many farmers continue to cultivate it extensively, and not unfrequently get a large product. In former times, it yielded some of the largest crops ever obtained at the west. Peter Sheffer, of Wheatland, once raised 40 acres of this wheat, which averaged 62½ bushels per acre; and in 1833, General H. raised 67¼ bushels from one bushel, sown on 1⅛ acres of ground.

The White May of Virginia, is another valuable variety. It was sent him by Mr. Coke, of Virginia, in 1837. This was the principal, and perhaps the only crop raised about the Chesapeake Bay, in 1800, and for some years subsequent, but is now said to be nearly, if not quite, extinct in that region. It has a fine, white berry, is quite heavy, having weighed 66 lbs. to the bushel, is prolific, and a good bearer. Its great excellence consists in its early maturity, by which it escapes rust. Wheat that does not ripen before the 20th July, is very liable to this.

The Wheatland Red is one of several species produced by General H., from the last mentioned, under the following circumstances. One quart was sown in the spring, which produced ten quarts of badly shrunk wheat. This was again sown, and the crop consisted of several different kinds, though carefully kept from intermixture with any other species. From these, he selected the Wheatland Red, which produces a large reddish berry, and ripens nearly as early as the Virginia May.

The Kentucky White bearded, called also, *Hutchinson Flint*, and *Canada Flint*, was introduced into Scipio, Cayuga Co., eight years since, and is now spreading rapidly over Western New York. The berry is short and plump and very white, and has weighed 64 lbs. per bushel. It is a fine yielder, hardy, doing well when sown late, but requires to be sown thicker than the Flint, as it does not

tiller as well. One and a half bushels per acre, is the least that should be sown, while of the former, one and a quarter bushels is the quantity usually sown. Unlike the *improved flint*, too, it shells very easily, and unless secured when quite green, it suffers much loss in harvesting.

The English velvet beard, or Crate wheat, has a strong, coarse straw, large heads, a good berry of a reddish hue, and is much cultivated on the rich alluvial bottoms of the Genesee Valley, its peculiarly firm straw preventing its lodging. It is a fair yielder, and tolerably hardy, but its redundant beards are a great objection to its general introduction on lighter lands.

The Bellevue Talavera, (English,) has been cultivated by General H. for two seasons, from imported seed. The first year it was plump and fine, but the present year, it is somewhat shrunk. It was sown thin, and was consequently late, which was the cause of rust, and subsequently shrinking. It has a heavy, large and white berry, and the heads are peculiarly large and fine, being equal to the choicest specimens of any other kinds. In England, it ripens early, and in consequence of its heavy head, it bends the straw very much, which however, does not prevent its perfectly maturing the grain. In this country, it produces a stiff straw, and maintains an upright position.

The White Provence produces a long, white plump berry, is a fair yielder, but has a slender straw, which is the cause of its frequently lodging. Like the improved flint, it is quite possible that careful cultivation may alter this peculiarity, and hereafter furnish a stalk sufficiently strong to sustain it.

The Yorkshire or English Flint, or as it is more generally known in Western New York, the *Soules' Wheat*, resembles in its general characteristics, the old Genesee wheat before mentioned. The heads are long, berry white and plump, and being a new variety, it has done very well since its introduction into the country, some five years since.

The Scotch Potato Oat which has been cultivated by General H., for some time, he considers a valuable variety. It has grown to the height of six feet and nine inches, and not unfrequently averages six feet on good, strong soil. The stalk is strong, and the head full and heavy. Its weight has averaged 44 lbs. to the bushel, for the last five years; 50 bushels per acre by measurement, he considers its average yield, though six acres have averaged 76 bushels per acre. He considers this a decided improvement over the ordinary oat. His system of cultivating this crop, is to sow after corn or potatoes, which have been well manured.

The system of wheat cultivation generally adopted in Western New York, is this. The wheat is sown in a clover turf, or summer fallow, from the 10th to 15th September. The quantity of seed is usually one and a quarter bushels per acre. Sowing a larger quantity produces a finer straw, with shorter heads, and earlier maturity, but does not, on the whole, afford a greater yield. If sown earlier than the time above specified, it is liable to the attack of the Hessian fly. This is an insect that appears at all seasons, contriving to get its living from other sources, when wheat is not to be found, but particularly productive and abundant when this crop comes forward early in the fall. The grain worm has not yet infested the fields in the western part of our state. If sown later than 15th September, it does not root as well, thereby exposing it much more to winter killing, and it does not tiller as well, by which it matures later, and is more liable to rust. The wheat ripens from the 7th to 27th July, averaging from the 15th to 20th; and it should be cut as soon as out of the milk, when the berry yields easily to the pressure of the thumb and finger. As good a wheat crop as was ever raised at the west, was produced in the uniformly cold season of 1816. It is probable that the superior wheat of England is owing to the longer time required to ripen it, by which, the berry is enabled to fill up more moderately, but much more effectually. Our warmer summers, on the contrary, push it forward so rapidly, that it does not have time to mature so large, full and complete a grain.

Before sowing, the seed should be washed in strong brine, which may soon be turned off and a quart of lime to every bushel is then added, and intimately mixed. After standing a few hours, say 12 to 24, it should be sown. When very smutty, the wheat should receive three thorough washings in strong brine, and lime as before, and this has been found effectual in securing the future crop from smut. Hatch's machine is used to some extent in sowing wheat, and all other kinds of grain broadcast, as also plaster. With this a boy will sow about 20 acres a day, and more evenly than can be done by the most experienced sower. It costs $40, and is easily kept in repair. The seed does better by changing, and especially from poor lands to richer, and as the land General H. cultivates, was once oak openings, which, but

for the limestone in them, would be justly reckoned among the most barren lands, seed taken from his soil may be expected to do well. When he first commenced cultivating his present farm, it had been so much neglected, that the produce was about one-third each, of wheat, chess, and cockle. A careful extermination of every unclean weed, has entirely eradicated them from his land, and he is now wholly indebted to his neighbors for whatever occasionally intrudes upon him.

The following spring after sowing the wheat, 7 or 8 lbs. of clover are sown per acre; either the large Northern or Vermont clover, or the medium Ohio is preferred. This may be lightly pastured in the fall. The following season it may either be pastured, or a crop of hay taken from it, according to the strength of the land. The subsequent growth after cropping, is turned under with the plow in August, with a flat furrow, on which the seed is sown and then harrowed. If the field is foul, or filled with June or blue grass, (which are synonymous terms,) and especially in a wet season, it should be turned over in June, and afterwards cross plowed with a cultivator from one to three times, to exterminate all grass and weeds, and again cross plowed the last of August, preparatory to sowing. The general rule, however, is to allow the land to lie two years in clover, which gives a three years' course, one of wheat and two of clover, and under this cultivation, with the addition of plaster, the land has been rapidly improving for twenty years. The soil in the neighborhood of General H., is a sandy or gravelly loam, sometimes inclining to a clay loam, and is always mixed with an appreciable quantity of lime. In its original condition, it was a very light soil, and of yellowish color, but with the judicious system now practised, it is constantly growing darker and richer. The soil is not well adapted to peas and barley, they requiring a larger proportion of clay. Corn, oats, and roots, are raised only for home use, constituting occasionally a part of the food of the cattle.

In an experiment of *sowing corn broadcast*, on the 1st June, at the rate of one and a half bushels per acre, on rich land, General H. obtained 18 tons of green stalks per acre. The stalks were small, and almost entirely without ears, and so full of saccharine matter, that the cattle ate them perfectly clean when dry, though uncut. The yield was estimated at 6 tons dry fodder per acre, and was raised on a clover sod turned over and sown the last of May, and the corn cut Sept. 15. We should like to see the record of some well attested experiment, as to the relative nutrition of equal weights of corn fodder so raised, and good hay. The comparative value given in our last, from experiments in France, would probably not apply to corn raised in the above manner, as the saccharine matter, which goes to supply the corn in the ear, is retained in the stalk, and adds materially to its nutritive properties.

General H. has left with us all the foregoing varieties of wheat, and the potatoe oats, which we shall be happy to show to such of our readers, as are desirous of comparing with their own specimens. Wheat being the staple crop of an extensive section of the United States, and a particular object of attention in all, it is of great consequence that the best kinds are secured for cultivation.

Silk Raising.—(*Continued.*)

Feeding.—Under this head, we cannot do better than to give some of the judicious observations of Mr. G. R. Smith. He says: "The young worms are very easily removed from the hatching table, by laying small mulberry leaves upon them, and when they attach themselves to them, take each leaf by the stem, and lay it on the shelf where you want the worms. Feed the young worms by laying on them a few fresh leaves four or five times a day, or oftener, if they consume them, or the leaves become wilted. During the first age, if the leaves are large, they may be torn, or cut into small pieces; but if you have plenty of leaves, it is not necessary. After they have moulted the first time, lay on leaves, and when the worms become attached to them, lift them by the stems and lay them on a clean place on the shelf, allowing them about three times as much space as they occupied before. You may then clear off the shelf previously occupied by them. The same operation may be performed after the second, third, and fourth moultings, extending the space they occupy each time, as in the first, and clearing off the litter in the same way.

In feeding the worms, from the beginning to the end, it is of importance that they be fed often and in small quantities. If you lay on too much food a considerable portion will be wasted; but that is the least consideration—the shelves will become loaded with rubbish, which will render it necessary to clear them often. We have always found it to be a good plan to keep the attendant continually feeding—always passing along the

shelves with a basket of leaves, and whenever any of the worms are found without food, or nearly so, lay on a few leaves, and thus keeping them continually eating fresh leaves. We know it is the practice almost universally, to feed at stated times—three times a day, or four, or five, and to weigh the leaves, giving at each feeding a certain quantity; but all our experience goes to prove its impropriety. Late at night a full supply of leaves, according to their age, ought to be given them, that they may have plenty during the night. Strange as it may appear, many persons suppose the worms do not eat much at night; the truth is, they eat rather more at night than in the day-time, as do all caterpillars; and they ought either to be fed occasionally during the night or have a supply given them over night sufficient to last them till morning.

Wet leaves should not be given to silk worms, nor those having sand or dirt on them. If it cannot be avoided during long rains, necessity of course will compel the feeding with wet leaves; and generally, this may do no harm; but I have seen very large quantities of worms destroyed by it. It should always be avoided, if possible.

The moulting of the worms will occur four times, but unless closely observed, and the several days' hatchings have not been kept carefully separate, these changes will be scarcely noticed. The times of moulting vary, according to the treatment the worms receive. If fully fed, and a proper temperature be kept in the room, they will moult about every five or six days; if a contrary practice be pursued, they may do so every seven, eight, or nine days. If each day's hatching have been kept by themselves, and they have all been properly fed, all the worms of one hatching will generally moult about the same time, and they should not be fed while they are in the moulting state. They generally remain in this state from eighteen to thirty-six hours. As soon as they revive they should be fed, as above directed, with large leaves, or even branches, and as soon as they attach themselves to the leaves, they should be removed to a clean shelf. It is frequently the case that only a part of them moult one day, and the balance the next. In this case the two moultings should be carried to separate shelves, and thus be kept separate in future, as they will otherwise not spin cocoons regularly. As the space occupied by the worms must necessarily be extended as the worms grow, the most convenient time for doing it is after each moulting. And if this be properly done, all the worms on each shelf can be made to spin at the same time, and thus save the attendant much inconvenience. To effect it, all that is necessary, is to separate the several days' hatchings, and at each moulting to collect all that revive at one time, and place them by themselves. Those who observe this precaution will be well paid for their attention.

After the fourth moulting, if you have plenty of trees, and do not care about the waste of cuttings, you may cut off small branches with the leaves on, and lay them on the shelves. In feeding in this way, you can save much time, the leaves keep from wilting longer, and more worms can be accommodated on the same space. The branches should be laid first across the shelf, say six inches apart; at the next feeding they would be laid lengthwise of the shelf; and the next crosswise again, and so on alternately crosswise and lengthwise at each feeding, so that the pile may form a mass of crib-work, affording a free passage for the air, and accommodation for the worms, into which they will descend, to form cocoons. The objections to this plan are, that in damp weather the mass of rubbish and dung of the worms, is apt to ferment, and thus produce disease; and also the loose tow of the cocoons is lost, as it becomes so filled with dirt and fragments of leaves, that it is not worth saving. It is believed, however, that the value of this tow is less than the trouble of the ordinary fixtures for the worms to spin on is worth. The writer of these remarks, raised his silk worms one season on this plan, and the cocoons produced were equal to any he ever raised. Care should be observed in feeding in this way, not to lay on so many branches as to raise the pile too high; as, if it approach near the bottom of the shelf above, before the worms are ready to spin, it will be very inconvenient to feed them. Not more than four or five courses of branches should be laid on each day, and the intermediate feedings should be with clear leaves, so that the pile may ascend not more than an inch and a half each day, and that the height of the pile on the shelf when the worms begin to spin may be about nine or ten inches. If, however, the pile should get too high, or if it gets damp and mouldy, the lower part can be easily removed by passing a couple of smooth sticks through the pile two or three layers below the worms; and by means of these, gently raise the upper layers with the worms on, and remove all

below. We found no difficulty in cleaning our shelves in this way.

During the whole time the worms are feeding, attention should be paid to cleanliness—that is, the room should be kept free from filth and bad smell. In very hot weather, the windows should be opened to give free air; and in cold damp weather, if it can be done, fire should be kept in the fire-place. It is proper to observe, that unless the weather be very cool, no other injury will be done the worms than stopping their feeding and growth during its continuance. We have had weather so cold, as to produce thin ice in our cocoonery, without other injury to the worms, than stopping their growth a few days; that is, it required two or three days longer to produce the cocoons than it would have done, had not the cold weather occurred. Therefore, though it is always better to keep the room moderately warm, by fire, if necessary, yet it is not indispensable to very fair success.

If disease occur in the worms, particularly the yellows, the best way is, to take the sick worms from the shelves, and throw them away as soon as they are discovered. The yellows, is both a contagious and hereditary disease; and hence, if one worm is attacked by it, it will be sure to be communicated to the others; and worse than this, even if the sick worms get well, which they seldom do, the eggs they produce are almost certain to produce sickly worms, and by this means, the crop of the succeeding year will be lost.

When it can be done, one or two days' supply of leaves should be gathered ahead, and kept in a cellar, that no damage may be sustained during rainy weather. But great caution should be observed not to feed with *wilted* leaves. It were better to give the worms wet leaves than wilted ones. If kept in a cellar and occasionally shook about, the leaves will keep three days in good condition. Where no cellar is at hand, and where you have plenty of trees, you can keep leaves fresh three or four days, by cutting off the tops and branches of the trees, and setting the butt ends in water. If the end of a branch be set in water one inch deep, it will keep the leaves fresh. For this purpose, tubs might be used, and large quantities of leaves kept in this way.

The sun should never be allowed to shine on the worms; and if any of them are exposed to it, the window should be so shaded by shutters or blinds as to prevent it.

Successive crops may be fed, if it be desired to occupy the whole season, by keeping the eggs in an ice-house, and bringing out portions of them at each time of hatching. It is believed, that this is a much better plan than commencing with the whole at once. All new beginners should commence in the spring, with one-half an ounce of eggs, to be hatched as soon as the leaves put out. From the cocoons formed by this crop, eggs for next year's use should be saved, and reelers should be taught. The very best cocoons should be selected to produce eggs."

When the worms have finished eating, and are sufficiently matured for spinning, they will be seen to raise their heads, apparently seeking some place to wind their cocoons. A suitable place for this, Mr. Smith suggests, is the crib work formed by the alternate cross layers of the mulberry branches, which have been properly arranged while feeding. In addition, some use small bundles of clean straw, with the heads cut off, and tied at the top and sufficiently spread at the bottom to allow the worms convenient accommodations for winding. These are kept securely in their places, by being so cut as to touch both at the top and bottom between the shelves, and from this straw they are easily gathered without any loss to the cocoons. Branches of green poplar leaves, as recommended on page 49 of our paper, or boughs of oak leaves, are suitable for the worms in winding their cocoons.

After remaining about eight days, a sufficient number of the best should be first selected for eggs, and as nearly as possible equal numbers of males and females, the first generally being indicated by one pointed end, somewhat drawn in at the middle, while the latter is nearly alike at both ends. The cocoons may be at once reeled if convenient; but if they are required to be kept for any length of time, the chrysalis must be stifled, which is effectually done by exposure in a hot sun for two or three days; or, by baking in an oven at not too great an elevation of temperature. They should then be carefully laid away beyond the reach of mice or other vermin, in a dry, safe place.

In about fourteen days the millers come forth and couple; after a connection of twelve hours, they should be carefully separated, and the males thrown away, unless there is a deficiency, in which case, they should be retained for further use; but it is believed the worms are not, in all cases, as good, which are produced from the male when used a second or third time. Soon after the separation, the female discharges a brown substance, after which, she is to be

placed on a clean paper or muslin, and laid carefully away in a dark place. She soon after lays her eggs and dies. The directions for the preservation of the eggs have been given before on page 206 of our paper.

Reeling.—This is the next process to be accomplished, and is an operation that should always be done, when possible, on the premises where the worms are raised. The reasons are, that it is easily performed where a moderate share of intelligence, care, and perseverance are used; there is a great deal of profit in it; and the cocoons are liable to injury when moved to a distance. The common reel in use is the Piedmontese, which is, perhaps, as simple a plan as can be adopted. Some modifications of this have been made in other machines in general use. At an extensive manufactory in Ohio, the circumference of the reel is invariably 4 feet, which prevents tangling; and it is considered by them to be *indispensably* necessary to limit the reel to this size. We here give the latest French improvements for this purpose.

Fig. 16.

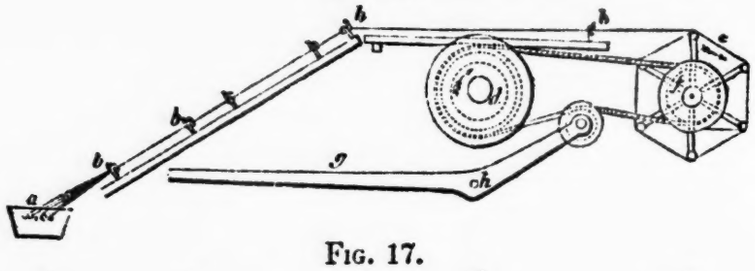
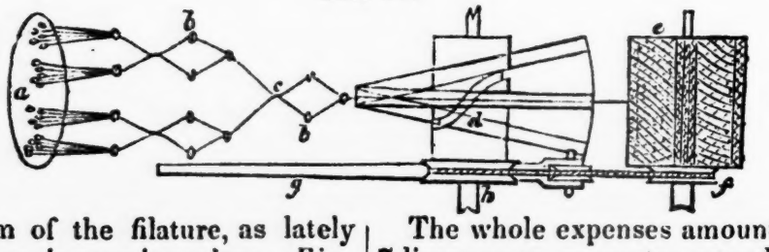


Fig. 17.



The mechanism of the filature, as lately improved in France, is very ingenious. *Figs.* 16 and 17, exhibit it in plan and longitudinal view. *a* is an oblong copper basin containing water heated by a stove or by steam. It is usually divided by transverse partitions into several compartments, containing 20 cocoons, of which there five in one group, as shown in the figure. *b*, *b*, are wires with hooks or eyelets at their ends, through which the filaments run, apart, and are kept from ravelling. *c*, *c*, the points where the filaments cross and rub each other, on purpose to clean their surfaces. *d*, is a spiral groove, working upon a pin point, to give the traverse motion alternately to right and left, whereby the thread is spread evenly over the surface of the reel *e*. *f*, *f*, are the pulleys, which by means of cords, transmit the rotatory movement of the cylinder *d*, to the reel *e*. *g*, is a friction lever or timber, for lightening or slackening the endless cord, in the act of starting or stopping the winding operation. Every apartment of a large filature contains usually a series of such reels as the above, all driven by one prime mover; each of which, however, may by means of the tumbling lever, be stopped at pleasure. The reeler is careful to move any slight adhesion, by the application of a brush in the progress of her work.

The whole expenses amount to from 6 to 7 livres upon every ten pounds of cocoons; which is about 50 cts. per pound of raw silk.

The cheapest and simplest machines are best adapted for general use. The directions for reeling we add from Mr. Whitmarsh: "The water for reeling must be *soft* and free from sand or dirt. The degree of heat must be graduated by the state of the cocoons; no definite rule for it can be given. As a general rule, the water should not boil, but be kept nearly at the boiling point. If the water is too hot, the silk will come off in burrs, and it must be cooled; if too cold the cocoons fly up to the guide wires.

Press the cocoons *gently* under the water with a bunch of twigs or broom corn; the ends will adhere to it. After collecting a sufficient number, pull off the coarse silk till it runs clear. When another thread is collected in the same way, cross them eight or ten times, before going to the reel. You will then pass the threads through the guide wires to the reel, attaching them in two places for two skeins. Turn the reel *steadily* and rapidly. Join the ends constantly as some run out or break. Keep the water clean by taking out the skins with a skimmer. The water must be changed twice a day. The silk should be left on the reel to dry rapidly.

The most convenient way to heat the water is by steam. Make the basin double, one within the other, leaving a space of an inch for the steam to pass in at one end and out at the other. With a stop-cock in the pipe, you may have full command of the heat and regulate it at pleasure. A small boiler heated by a lamp, would answer every purpose for domestic use; it is certainly to be preferred to a furnace of charcoal."

Reeling is an important operation, and must be well and evenly done, if a fair price is expected for it in market; but it is as easy to do it well as ill, and there is no difficulty in it with proper care and attention. Mr. Deane, in a communication to Mr. Smith, says:

"From motives of shere curiosity I attached the fibre of a cocoon to the bars of a common reel, and with a gentle movement began to turn. It ran off, and I turned faster and faster until the revolutions drew out a thread nearly one mile in length. The discovery unfolded by this simple manœuvre determined me to follow up the subject, and having no means of procuring a suitable reel, I constructed one after my own fashion. I arranged all things for a fair start, and to my astonishment I soon disengaged a couple of skeins of surpassing beauty. The experiment satisfied me that there were no complex principles to overcome, but that by the observance of a few plain directions, all impediments to success speedily vanish. I was surprised to witness the facility with which cocoons are unwound, but I was surprised by the novelty merely. To produce a perfect filament from wool or cotton, requires the perfection of machinery and skill, but here we have formed to our hands a thread which no art can approximate, and all we have to accomplish is the union of a certain number of these ready made threads by a process easily comprehended and attained by any intelligent mind.

I continued my operations until I completed two pounds of silk, one part of which I sent to the Fair of the Massachusetts Charitable Mechanics' Association, and the other part to the Fair of the American Institute, and from each of these noble institutions I was honored with their silver medal. I mention these things as a voucher for the quality of my first production in this delicate art. What I have thus accomplished without ever witnessing the method, it is in the power of all, particularly the young women, for by the delicacy of their fingers, their patience and perseverance, they may easily acquire perfection in the beautiful art that should engage their especial attention."

Another description is given by Mr. Smith of an old gentleman who had never seen the operation performed.

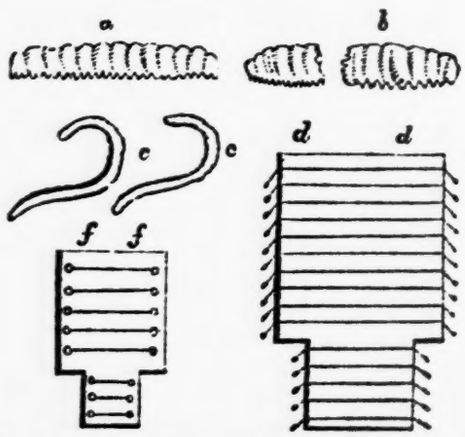
"He had constructed a Piedmontese reel, from the drawing and description in the Silk Journal, and placed it in a back room for the purpose of giving it a fair trial. He had carefully studied all the directions for the operation, and prepared himself to carry them out literally. After some difficulty, he had caught the fibres of as many cocoons as he wished to combine in a thread, had got the two threads passed through the eyes of the plate, and even passed them around each other twenty times, as directed, before passing them through the guides of the traversing bar on to the bars of the reel. At last all was ready. He looked at the cocoons, at the threads, *wound around each other*, and at the reel, with doubt and hesitation. 'It will not do,' said he, 'surely those threads wound round each other in that manner cannot pass freely—they must break with a slight turn of the reel.' He at last ventured to touch the crank gently—the thread passed freely, and he was encouraged to turn a little faster, when it passed off still more freely. Thus encouraged, he turned the reel faster and faster, increasing by gentle degrees, till he put it into full speed; and the faster he turned the more freely the thread passed, and the more easily the cocoons unwound. He was so delighted with his experiment, that he called in his family to witness his success—for he had made the experiment in private, that he might not be exposed to the laughter of observers, in case of failure. He then proceeded, with the aid of one of his family, and reeled a skein of raw silk according to directions, and sent it to a neighboring city, where there was a person, a foreigner, who was considered a good judge of raw silk. The silk was shewn to him, and he pronounced it *Italian raw silk* of excellent quality, and insisted that the skein exhibited was reeled in Italy, and could not have been reeled in this country. After, however, he was assured that it had been produced here, and he was requested to point out any fault it might exhibit, he discovered that the thread was occasionally *loose*. That is, there were spots occasionally, in which the fibres remained unconnected by the adhesion of the gum. No sooner was this fault pointed out than the cause flashed upon the old gentleman's mind instantly. It was this. During the process the reel had been stopped occa

sionally for the purpose of replacing exhausted cocoons, &c. and when it was recommenced, he had omitted to *wet* the fibres below their junction at the crossing. The fibres at that point had of course not been brought into perfect contact, and had become dry; therefore when they passed up and through the crossing, they of course did not remain adherent, and hence the thread in the skein presented those spots of loose or inadherent fibres—the perfection of raw silk requiring the several fibres to be closely united by their gum into a cylindrical thread."

The simplicity and ease of reeling silk is detailed thus fully, to take away all excuse for omitting it. We may add a plan for *silk throwing* in our next.

We give here a description for making a new article from the silk worm.

Fig. 18.



Silkworm Gut, for angling, is made as follows:—Select a number of the best and largest silkworms, just when they are beginning to spin; which is known by their refusing to eat, and having a fine silk thread hanging from their mouths. Immerse them in strong vinegar, and cover them closely for twelve hours, if the weather be warm, but two or three hours longer, if it be cool. When taken out, and pulled asunder, two transparent guts will be observed, of a yellow green color, as thick as a small straw, bent double. The rest of the entrails resembles boiled spinage, and therefore can occasion no mistake as to the silk-gut. If this be soft, or break upon stretching it, it is a proof that the worm has not been long enough under the influence of the vinegar. When the gut is fit to draw out, the one end of it is to be dipped into the vinegar, and the other end is to be stretched gently to the proper length. When thus drawn out, it must be kept extended on a thin piece of board, by putting its extremities into slits in the end of the wood, or fastening them to pins, and then exposed in the sun to dry. Thus genuine silk gut is made in Spain. From the manner in which it is dried, the ends are always more or less compressed or attenuated. *Fig.* 18, *a*, is the silkworm, *b*, the worm torn asunder; *c*, *c*, the guts; *d*, *d*, a board slit at the ends, with the gut to dry; *f*, *f*, a board with wooden pegs, for the same purpose."

The above cuts and description are from Ure's Dictionary.

Storing Roots for Winter.

It is important that the farmer have his roots properly secured for the winter. To such as have not cellars sufficiently large and convenient for this object, the best plan is to store them in some place contignous to the stock which is to consume them. For this purpose, a piece of ground should be selected, from which the water will run off freely. On the surface of this the roots may be placed, in high conical, or oblong heaps, having an exterior as even and compact as possible. The long roots should be regularly laid up, with the large end on the outside, and in the form of a steep roof, and of the size required, and as these *walls* are carried up, the interior may be filled up with the roots, taking care to give them as much compactness as possible. When the pile is complete, it should first be thatched with straw or hay, so as to conduct to the bottom of the outside, whatever water may find its way to the interior. This should be covered with a coating of clay, or the most tenacious earth that is convenient, to the depth of 4 or 6 inches; or 8 to 12 inches is not objectionable. The first thickness is not sufficient to exclude the frost in moderately severe winters in this latitude, but this we do not consider of consequence, unless the roots are required for use while frozen; as, if kept carefully covered while in this condition, the frost will be extracted gradually on the returning warmth of spring, and the roots will be left in every respect as good as if they had not been touched by it.

Some winters since, we had a large pile of sugar beets carefully protected in the way described, from which we were feeding through the inclement season. They were taken from one end, which was carefully closed by straw whenever opened, but owing to the carelessness of the stock-tender, this was left open for a day or two of the coldest weather, and when we first noticed it, we concluded our crop of one or two thousand bushels, would be completely ruined. We ordered the hole to be closed and examined the other end and sides, but from the inadequacy of the covering, and the free circulation of the

air inside, the roots had become frozen as far towards the centre as we examined. Of course we looked to the ruin of the heap as inevitable, which we regretted the more, as it contained the roots intended for seed. We used what we could while thus frozen, and hurried on the consumption as fast as possible, but had made little progess before an unusually early spring had fully established itself. We still kept the pile carefully covered, to prevent the escape of the frost, as we fully expected the roots would go with it. Our surprise may be conjectured, when on visiting the heap one day, we found all the frost gone, and the roots–*every root*–as fresh, hard, and plump and juicy, as when first put up. They kept in this condition till they began to sprout, when those intended for seed were set out and bore as finely as any we ever saw. The remainder were carried to a dry place, where they retained their flavor and full value till the last of May, by which time they were entirely consumed. This experiment taught us that *it is not the freezing, but the sudden thawing that destroys roots, fruits, and vegetables of all kinds.* We have since noticed that apples in barrels may be frozen hard, yet if kept in a cellar or the lower part of a close brick warehouse, and the frost allowed *gradually* to escape, they are uninjured, and trees and many vegetables that are caught by a late frost in spring, or an early frost in Autumn, if shielded from the sun and kept at a low temperature till it has escaped, are not materially injured. For the above reason the experienced cook puts frozen vegetables in very cold water, as near the freezing point as possible, by which the frost is gradually extracted from the vegetables, and their flavor and character remain unchanged.

Potatoes required for summer use, are sometimes buried in dry sandy land at considerable depth, either in the woods or the north side of a hill, and we have seen them taken out from such situations on the 1st of June, as fresh as when put in. Care must, however, be taken, that the soil is such as to hold no water at the bottom, or the roots will inevitably spoil. On clay soil, the only recourse is to have a ditch surrounding the pile, and sufficiently deep to conduct away any water that may fall on the bottom. One or more holes, according to the size of the heap, should be left on the top, which must be loosely stopped with hay or straw, to allow the escape of gas, which is constantly generated from the roots. The above principles are applicable to nearly all vegetables under similar circumstances.

AMERICAN INSTITUTE.

Reports from the Agricultural Department of the American Institute, October, 1842.

Plows and Plowing.—"The following plows were entered for competition:

1st. One by F. L. Wyckoff, of Flat Bush, L. I., Wisconsin plow. 2d. One by Cornelius Bergen, Brooklyn, L. I., Bergen self-sharpening plow. 3d. One by Minor, Horton, & Co., Peekskill, N. Y., M. H. & Co's., No 22 plow. 4th. One by Philip S. Crook, Brooklyn, L. I., Bergen plow. 5th. One by Charles Howard, Hingham, Mass. 6th. Also for exhibition and plowing, by Mooers & Slater, Ithaca, N. Y., Side-hill and level land plows.

The ground upon which the plows were tested, was a clayey loam, quite dry and hard *at the surface* without much sward, and unfavorable for smooth and handsome work. It required, however, less power of draft than would be requisite in most soils.

The competitors were requested to turn furrows each twelve inches wide and six deep. The following table gives the power required for each plow, and also the weight of the plows.

	Average power.	Weight of Plow.
F. L. Wyckoff's Wicsonsin,	335 lbs.	140 lbs.
C. Bergen, self-sharpening,	332½ "	131 "
Minor, Horton & Co's., No. 22	325 "	139 "
Philip S. Crook's, Bergen plow,	312½ "	124 "
Mooers & Slater's, side-hill,	335 "	166 "

C. Howard's, sent by him from Mass. did not arrive.

After testing the draft and examining the work executed by the several plows at the trial for *plowing*, the Judges decided unanimously, that of the plows entered for competition and tried by them, that

Minor, Horton, & Co.'s No. 22 is best.

F. L. Wyckoff's Wisconsin is next best.

Mooers & Slater's side-hill and level land plow, entered for exhibition, is an implement of ingenious construction, which accomplished its work well.

This last plow was not entered for competition.

Plowing.—At the trial of plowing, there were four regular entries, and the lots were drawn as follows, viz:

No. 1. By Cornelius Bergen, Brooklyn, L. I., self-sharpening plow.
No. 2. By Philip S. Crook, Brooklyn, L. I., Bergen pl.
No. 3. By Mooers & Slater, Ithaca, N. Y., side-hill pl.
No. 4. By F. L. Wyckoff, Flat Bush, L. I., Wisconsin plow.

Each of these plows was drawn by a span of horses.

No. 5. Minor, Horton, & Co., of Peekskill, N. Y., who had made no arrangements for plowing, allowed their plow to follow a yoke of oxen picked up on the spot at the moment, and indulged Colonel W. L. Stone, of New York, with the privilege of acting as plowman.

Each lot as staked off, was about 210 feet long, by 27 feet, and contained about one-eighth of an acre. The texture and condition of the soil, were the same as that on which the draft of the plows had been tested.

After an examination of the work, the Judges unanimously decided that lot No. 3, plowed by Mooers & Slater was best.

No. 4, plowed by F. L. Wyckoff, second best.
" 5, " Minor & Horton, third best.

JEREMIAH JOHNSON, New York.
ALLEN PUTNAM, Massachusetts.
PH. SCHUYLER, New Jersey.
} *Committee.*

Corn and Oat Crops, belonging to Mr. F. I. Betts of Newburg, N. Y., to which was awarded the first Premium.

Field Crops—*Corn.*—The soil was a very tough green sward, having been several years laid down to

grass and occupied for pasturage. From the 4th to the 8th of February last, the ground then being entirely free from frost, the whole field was thoroughly plowed; in the second week in May, two bushels of salt and fifteen wagon loads of manure per acre, were spread broadcast over the field, and the field was then thoroughly cross-plowed and harrowed, and the corn was planted in hills, (the hills being between three and four feet apart,) each hill being covered with about half a shovel-full of manure; the only subsequent cultivation was plowing and hoeing twice and going once through it with the cultivator.

On the 19th of September, the corn was cut up close to the ground and put up in shocks of an equal size upon the field; and as it is not yet husked, the only practicable mode of ascertaining the quantity of the product, has been fairly and justly pursued by me as follows, to wit:—I have husked twelve of the shocks from different parts of the field, taken indiscriminately, and averaged the whole crop according to the quantity produced from them, and find that the field (containing by accurate measurement, four acres, two roods and twenty-three perches of land,) has produced nine hundred and fifty and two-third bushels of ears of corn, equal to two hundred and five and a half bushels of ears per acre. As a portion of the field was injured by the frost in June last, the best acre no doubt exceeded in product the foregoing average.

Oats.—The soil had for many years previous to 1841, been laid down to grass, and the field occupied for pasturage; in the spring of last year, the field was planted in about equal proportions with potatoes and corn, and had then applied to it about twelve loads of manure, (a compost of muck and barnyard manure,) per acre.

About the 23d of April last, the field was well plowed, and the oats on the same day were sowed at the rate of three bushels to the acre, and were harrowed in, which was the only labor expended upon the field, until the crop was harvested.

An acre of the field was accurately measured before the crop was harvested, and the grain therefrom has been kept and threshed by itself and produced seventy-seven bushels of clean oats. The whole field contained about three and three-quarters acres, and the grain thereupon was about equally good throughout the whole of it. The undersigned cannot close this report without calling public attention to the judgment and good taste which Mr. Betts has displayed in the irrigation and fertilization of the soil, the subdivision of his farm into lots of convenient sizes, their entire exemption from vegetable excrescence, and to the neatness, order, and cleanliness which is presented in every department of his establishment. This farm contains about one hundred and twenty acres, and may, in the opinion of the undersigned, be refered to as a pattern farm, every way worthy of imitation.

Corn.—In respect to the field of corn which belonged to Mr. Carman, the undersigned, not finding that gentleman at home, are unable to give any of the details respecting its cultivation, except that they learned from a laborer who had assisted in working the field, that it had not received any extraordinary manuring or attention. They computed the product of this field at eighty bushels of shelled corn to the acre. The farm of Mr. Carman appeared well arranged and in good condition and merits particular notice.

EDWARD CLARK, Chn.
MARTIN ELLSWORTH.
NICHOLAS WYCKOFF. } *Committee.*

New York, October 22d, 1842.

HORTICULTURAL—*Cabbages.*—The Committee on the 8th Sept. 1842, examined a field of Cabbages of about twenty acres, comprising part of the farm of Mr. Lambert Wyckoff, at Bushwick, Long Island. The plants having been set out about three feet apart, early in the spring, had arrived to good maturity, and although a great proportion of the crop had been sent to market, that part which remained was uniformly in fine condition. A dozen cabbages were selected from less than an acre of land, the average weight of which was twenty-four pounds nine ounces and a quarter. On perambulating the farm, a bed of the Red Pickling Cabbage was presented to our view; from which we selected half a dozen heads, the average weight of which was twelve pounds nine ounces and a quarter; being one-third more than the usual average weight of this description of cabbage. These crops reflect great credit on the gardener, Mr. Peter Hultz, who is an adept in the culture of cabbages, he having been eminently successful in producing superior crops, during the last two or three years. From the above considerations we suggest that the proprietor, Mr. Lambert Wyckoff, be presented with a Silver Cup, as a memento of his indefatigable zeal in cabbage culture.

On the 23d of September, 1842, your Committee visited by invitation, the farm of Garret Vreeland, where we found on about three acres of land, a crop of cabbages, in a medium stage of growth, which bid fair to arrive at full perfection by the month of November, which is the ordinary time of gathering them for market. It may be here remarked, that the land in this section of country is of very rich and fertile quality, being literally embedded with the shells of oysters. So congenial is the soil to the growth of cabbage, that the roots of this plant are seldom attacked by insects, which prove so destructive in less favored situations. Hence perpetual, vigorous, and healthy crops are gathered from the same beds, arising from the great quantity of nutritious matter, mingled in the earth by remote causes. The plan generally adopted, is to plant a little over two feet apart, by which means they produce, on the average, from eight to nine thousand cabbages per acre. In some parts of Long Island, or in other sections, where the land is less fertile than that of Bergen County, it is customary to plant cabbage about three feet apart, and to deposit a shovel full of animal manure in each hill, hence the result is a growth of heavier and larger heads, from the facility of expansion—though the greater number grown in the same space by the "Men of Bergen" will perhaps equal, if not exceed in weight the crops of their neighbors on Long Island.

After surveying Mr. Vreeland's crop, we took a circuit of three miles around the southern part of Bergen Township. In the course of this short ramble, not less than six hundred thousand heads of cabbages, fresh, vigorous, and thriving, came within our view. A finer display in the same space could not perhaps be exhibited in any part of the world. We could not depart from the scene without heartily wishing health and prosperity to the independent cultivators of this excellent vegetable, which has long redounded to the fame of the Krout fraternity of Bergen, and furnished a most important and indispensable dish to the tables of every citizen in our great metropolis.

Subjoined are the names of the cultivators above alluded to.

		Acres.	Cabbages
Garret Vreeland,	about	3	25,000
George Vreeland,	"	9	70,000
Jacob Vreeland,	"	3	25,000
John Vreeland,	over	1	10.000

		Acres.	Cabbages.
Stephen Vreeland,	about	8	60,000
George Vreeland, Jr.	"	3	25,000
Michael Vreeland,	"	3	25,000
John M. Vreeland,	"	2½	20,000
Henry Brinckerhoff,	"	2½	20,000
Cornelius Brinckerhoff,	"	1½	20,000
John Brinckerhoff,	"	2½	20,000
John Van Horn,	"	6	50,000
Mr. Prichard,	"	3	25,000
John J. Van Horn,	"	3	30,000
John G. Van Horn,	"	3½	30,000
Myndort Van Horn,	"	3½	30,000
John G. Van Horn, Jr.	"	2½	28,000
Myndort Vreeland,	"	2½	20,000
Abm. Vreeland	"	3	25,000
Richard Vreeland,	"	2½	20,000
Jacob Stultz,	"	3	25,000
Abraham Post,	over	1	10,009
Mr. Bell,	about	2	15,000
Mr. Jackson,	"	2	15,000
TOTAL—about		77½	630,000

Turnips.—On the 20th of September, 1842, your Committee visited the estate of Mr. John Jones, near Hurlgate, New-York, for the purpose of inspecting a Field of Turnips. Your Chairman having furnished the seed for this field on the first of August, being but seven weeks previous, was astonished at the perfection to which this crop had arrived. His associates were also delighted at the extraordinary regularity of their growth, the refreshing greenness of their tops, and, tempted to test their quality, pulled several of them from the earth, which averaged from ten to twelve inches in circumference, and were of a delicious flavor. Two pecks of these turnips were forwarded to the Horticultural room October 8th, some of which measured eighteen inches in circumferenee. The grand secret of the prodigious growth, rested on the simple fact of their having been hoed out twice, and cultivated on the English principle. On the above occasion we also visited a field of Indian Corn, on this estate, which had been ploughed through in the usual way, but had not undergone the operation of the hoe. It was in a state of great luxuriance, a great proportion of the stalks being from eight to ten feet in height. Samples of this corn were also forwarded by the proprietor to the Horticultural room of the Institute, together with several fine specimens of culinary vegetables, viz., Potatoes, Onions, &c., which would entitle him to several distinct premiums, but in consideration of their not being entered for competition in distinct lots, the Committee of Judges on Vegetables adjudged a Silver Medal, as a fitting reward for such eminent success in field culture.

Flowers.—The Committee cannot close this report, without awarding their meed of unqualified praise to the disciples of Flora, both professional and amateur, who by the rich displays of the beauties of nature, frequently replenished during the Fair, have rendered the Horticultural room the centre of attractions, which is eminently calculated to stimulate our fellow citizens generally, to pursue that most healthy and enchanting of all recreations, the cultivation of Flowers, an employment which cannot fail to attach man to his home, and thus promote domestic happiness; and it is an indubitable fact, that he who delights in his home, and feels disposed to embellish it, will be likely to hasten to it, when he has done his business abroad, instead of wasting his time in the pursuit of transient and dissolute pleasures, which lead too many of our race to disgrace, misery, and an untimely end.

THOMAS BRIDGEMAN, Chairman.

Oct. 21st, 1842.

GARDEN ORNAMENTS.

"I count the hours that are unclouded."

Mr. Thom's Sun Dial.—This beautiful triumph of art, and which is the oldest method of measuring time, so long a desideratum even in its simplest form, in this highly favored land, will no doubt foster our incipient taste for combining the ornamental with the useful. Throughout the Continent of Europe and the British Isles, gardens are considered as incomplete without a Sun Dial; while no expense is spared in procuring such specimens as may throw all competition into the shade. We have in this piece of Mr. Thom's, all the qualities that excite the admiration of amateurs—the material being brown free stone, similar to that used in Trinity Church, and possesses a softness and susceptibility of imitating nature, seldom to be met with, as may be seen from the most cursory glance at the oak leaves and acorns over the grand entrance to Trinity. It may not be out of place here to state, that the forementioned ornaments are all from the chisel of Mr. Thom, who has under his supervision, the entire mason work of Trinity, which will undoubtedly hand down his fame as an artist, through the stream of time, till many who now consider themselves as greater men, will lie forgotten in the grave. The height of Mr. T.'s Sun Dial is 4 feet 4 inches, the lower portion of the base 21 inches wide, the upper 15 1-2 inches, the shaft 2 feet, and swelling gradually out in the centre, while the capital is 11 inches high. We regret to say that, from the very nature of the case, the highly finished oak leaf ornaments around the base of the capital, will be partly obscured from view by the projection of the square designed for the gnomon. This disadvantage has been seen and guarded against by the raised platfrom, on which Mr. T. has caused it to be placed. Its situation at the entrance of the middle division of the saloon for garden ornaments may have prevented some from seeing it at all, but we doubt not, that its admirable proportions and graceful ornaments have been marked out by the discerning. We say to the artist, in conclusion, look out for orders of a similar kind.

Mr. Pike's Marble Sun Dial.—This garden ornament but for the presence of Mr. Thom's, would have undoubtedly excited particular attention on the part of visitors, and warranted a lengthy notice from this committee. As it is, however, we cannot pass it by, without expressing our obligations to the artist for furnishing us with so fine a specimen. Height 2 feet 9 inches, diameter of top 15 inches, base somewhat smaller, which gives it the appearance of not being altogether symmetrical.

We find in addition to the above, a *Cement Sun Dial*, about 3 feet in height, possessing some good points. Also a cast iron dial plate from the hands of S. Moore, Kensington, Conn., neat and durable. And as the demand for articles of this sort is now on the increase, we may mention still another variety, the plate of which is slate, with a metal gnomon.

Flower and Fruit Stands.—The flower and fruit stands composed of wire, by Mr. Oliver, show him to be a man of uncommon taste. He confines himself to no particular style, but, like nature, exhibits a great variety of phases. His contributions added greatly to the exhibition.

The cast steel Horticultural Scythe of about 2 feet in length, which, though not itself a garden ornament, is nevertheless a very necessary implement for trimming underneath ornamental shrubbery. It supplies what has hitherto been a great desideratum.

Mott's Cast Iron Vases—In pattern equal to the finest Italian models—in durability far superior, and embracing imitations of free stone, granite, and marble. The

cheap rate at which they can be furnished, is another and not a small recommendation of this invention of Mr. M. The cost of the cast iron is about one quarter of the marble vase.

The two last mentioned articles, as well as several others under the control of this committee, have made their appearance in consequence of a call from the American Institute, which, like Aladdin's lamp, is destined, ere long, to bring into general use, articles which, at present, would be deemed extravagant even as luxuries.

A beautiful bouquet of flowers, painted in water colors by Miss Hannah Collins. The drawing and coloring of this is exquisite; and the grouping of the flowers altogether exhibits a fine eye for a proper contrast in colors, and charming taste. It is wonderfully true to nature, from which it is drawn.

A Primrose plant and flowers, by the same, correctly drawn and most delicately colored from nature.

A fruit piece, in water colors, by the same delicate pencil—a large rare-ripe peach and a Bon Critian pear, both most admirably executed, true to nature in color and form.

Another fruit piece—Large red cheek peach and sprig of ox-heart cherries, by the same, deserving great praise.

A fruit piece by E. Whitfield.—This is admirably executed. The coloring and grouping very fine.

Another water color piece, by the same. This appears to have been executed with much less care, the colors are too glaring, and the shading in many parts not good. The bunch of grapes in particular, strike us as defective.

Nine small paintings of fruit, flowers, and shells, by the same, exhibit the hand of a master. They are beautifully executed, particularly the centre one representing two pinks, one beautiful blossom color, and the other a white; for a small painting we consider the tints and execution of this equal to anything presented.

The shell pieces of this group attracted the attention of the committee, the exquisite skill displayed by the artist in arranging the whole, so as to resemble a beautiful floral painting.

Two water color drawings from nature, by Mrs. Eliza J. Burr, are most admirable.

Alexander Walsh,
Walter Chisholm.
John Priestley,
} *Committee.*

Silk, *raw and manufactured.*—The committee were much gratified to observe a greatly increased number of specimens, including those which were presented for competition, as well as objects of curiosity, exhibiting the ingenuity of the producers. Among the former are many articles well wrought, displaying great skill, and evincing ability on our part, with more experience, ultimately to compete with any part of the world. Even now our cocoons and raw silk, and some of the manufactures of the article, might easily be mistaken for those of Italy, with its centuries of experience in the silk culture. From this addition to the exhibition over former years, the committee are pleased to infer that the practical silk culture did not expire with the speculation in Mulberry trees. *That* mania which was predicted by the opponents of the silk business in this country, as fraught with great evils, has not been without its benefits; instead of filling our fields with useless roots, which the plough could not eradicate, a valuable shrub has been introduced, acclimated, and diffused into the remotest corner of our land, which in its results, will realize to us the fable of the Golden fleece—produce as great a revolution in the agricultural products of our country as the introduction of the cotton plant, and probably in as short a period, will the article of raw silk form an important item in the exports of this country to Europe. With this firm belief, the committee beg leave again to call the attention of the Institute and through them to recommend silk growers to use great care in the selection of cocoons for seed. They again repeat that no cocoon has been brought to their knowledge which exceeds the Peanut variety. Of that variety the worm is hardy, feeds well, comes early to maturity and produces a large amount of silk of a very desirable quality, and in respect to reeling, has a decided preference to any other cocoon which the committee have examined. Some fine specimens are exhibited at the fair, but the committee do not advise that any other notice be taken of them, than to call the attention of silk growers to the Peanut variety and recommend them to raise no others. They would also caution silk growers against crossing this kind with any other variety, as the effect is to produce a less valuable kind, and the interest of the silk growers is to improve the breed instead of introducing new and inferior varieties. Even the Peanut silk worm may be improved by selection and care, and it is hoped all who are interested will take every precaution to prevent deterioration.

A very little care is necessary to produce a great crop of silk, and as it has been demonstrated repeatedly that silk can be made in this country with hired labor and at the price of American labor, (proverbially high! and may it long continue so,) for $2 per pound including all actual expenses of raising and reeling, we may reasonably expect an increased product from year to year, until it shall be brought to our Fair for exhibition in bales instead of skeins. The committee desire to call the attention of silk growers to the propriety of sending, even now, larger parcels for exhibition. A large parcel of uniform quality, ought to be entitled to the highest premium of the Institute. Many small samples are exhibited, one parcel now presented to the committee containing about 5oz., has four or five different qualities, and although handsome, has evidently been so prepared for this exhibition. It is not intended as a sample of the whole crop, its want of uniformity is an objection even if this were so. The committee respectfully recommend that at the next Fair of the Institute, a special premium be offered for the largest parcel of reeled silk, of uniform quality, of American growth, produced in the season of 1843, by one family or individual, and also, that competitors be requested to accompany each parcel or article produced for competition, with a written statement of the cost of production, and any other facts which they may wish to make known, or think may be beneficial to the Institute and country.

The specimen of raw or reeled silk which meets the approbation of the committee and is by them classed as *best* is No. 359, and consists of 1 1-2lb. in three skeins, which is a part of a parcel produced by a person who has never fed worms until this season, who was induced to use the Peanut cocoons from the recommendation of the Institute at the last Fair. This silk is well reeled, having in each skein a half a days work, reeled upon the Piedmontese reel, very even and uniform, with a round thread, well adapted to the present state of the silk manufacture in this country. The silk would be more valuable if reeled finer, but the operator would not probably have made it as uniform or as valuable with her slight experience in reeling. These facts alone speak emphatically in favor of the simplicity and feasibility of the silk business. The committee are informed by the agent of this silk that the producer,

reared it at a profit and is preparing to extend the business largely next season.

The specimen of raw or reeled silk denominated as second-best by the committee, is marked No. 1221, and is a larger parcel than the last mentioned, made from the Peanut cocoons but not as well reeled; it is, however, deserving of notice. The cocoons exhibited with the same parcel, are badly selected, having among them a large number of dupions if these were reeled togegether, as is very probable, the cause of unevenness of this silk is apparent. To show the importance of attention to the quality of reeled silk and the advantage of care in reeling, the committee have ascertained that the price of the article in the European market varies from $2 to $6 per pound, a difference entirely owing to the care bestowed on the production.

There are several other parcels, inferior to the two above named, not deserving particular attention.

Among the practical uses to which American raw silk may be usefully applied, is one discovered by Mr. James Hanley, harp manufacturer, which obviates a great objection, (heretofore considered insurmountable,) to that delightful instrument. In the variations of temperature in our climate, the harp is subject to be instantly unstrung, much vexation is experienced by the breaking of the strings and the apparent impossibility of finding some material, which, from its great strength would resist this action. The raw ungummed American silk is that material, and harp strings are now presented, No. 1086, made from it, which are acknowledged to be a great desideratum to the possessor of the harp, and are worthy of notice.

The committee refer more particularly to the list appended hereto as expressive of their opinion of the manufactured articles of silk exhibited at the Fair, and hope that their opinions thereon will coincide with that of the Board of Managers.

All which is respectfully submitted,

JOHN C. HENDERSON.
G. M. HAYWOOD. } *Committee.*
W. A. WOODWARD.

New York, October, 1842.

SILK MACHINERY.—The Committee report, that the articles appear to be few in number, and the Committee have found it difficult to meet the owners or agents to obtain from them an explanation of the merits of the several machines exhibited, and from their not being in operation, it is difficult if not impossible for the Committee to give such an opinion as will aid the Managers in deciding, whether they are entitled to the approbation and rewards of the Institute. The Committee are however enabled to give an opinion of the following articles :—

A Model for Feeding Silk Worms.—This to the uninitiated would appear to possess some merit, but the Commissioners are impressed with the belief that nothing is so valuable for that purpose as simple shelves or tables constructed of boards, jack-planed and covered, if necessary, with paper. Simplicity is necessary to the success of the silk business, and the Committee advise that the Institute recommend no complex machinery for the feeding, for no plan heretofore proposed has superseded the one above named, which has for its great recommendation, that it is precisely adapted to the purpose, and costs nothing for materials, as they are worth as much after use as before; and as there is no patent for it, the whole community are free to use it.

The silk business must and will ultimately become a great and important branch of productive industry in this country, and the whole matter is as simple as rearing chickens, and requires no expensive fixtures. Feed on shelves—use proper hurdles—give them straw or branches to spin in—reel on the Piedmontese Reel, which, although in use upwards of 160 years, has not been excelled, and it has given the Italian silk a character above all others, as well as advanced the price 150 per cent. above that from Bengal. Then let us encourage American artists to produce machinery for winding, throwing, spinning and weaving, and from what American ingenuity has done, we can easily imagine what it will do. It will give us facilities to compete with the pauper labor of Europe and India, and enable us to pay our own free labor a freeman's price, and still produce our silks in large quantities for home consumption and exportation, but better in quality than those now brought from afar.

A Silk Reel, not at all adapted for practical use. The silk reeled on it, if allowed to remain on the spool, as it is compactly laid and stiffens in that manner with its own gum, will in a short period become rotten and useless, like the cocoon, which loses half its value by keeping. The silk thus reeled cannot be used until again re-wound, and must then be first wet, which is an injury to the lustre.

The Committee being practical silk culturists, are prepared to express a decided opinion in favor of the *Piedmantese Reel*, and this has in fact become an American reel by some slight improvements in the gearing, though retaining the principle, which is calculated to give the thread evenness, roundness and lustre. The skein is the proper size for exportation, and adapted to the machinery of Europe, which will hereafter be our great market for raw silk, for the Committee look upon it as one of the events certain to happen, that this country will become a great silk producing country, and it should be the object of the Institute, as it is that of the country, to encourage the adoption of the simplest kind of machinery adapted to the purpose. With these views, the Committee cannot consent to recommend American reels or other machinery, simply because they are American, and not unless they are superior or better adapted to the purpose than those now in use in other silk countries. At the same time they are well aware that American ingenuity is fully adequate to invent and produce the kind required to meet the wants of the country, as soon as our farmers will produce the raw material.

The Committee are of opinion that the great desideratum in the silk business, simplicity, cannot be attained by the adoption of such machines as combine different principles, including the reeling, throwing, and spooling process in one—as it is certain that neither can be well done, and the effect of adopting such machinery will be to prevent American silk from taking its grade of number one, among the silks of the world, to which it is entitled.

The reeler, to make the best quality of reeled silk, has constant and full employment with an assistant to turn the reel; what folly then, to expect that one person should reel, wind, twist, double, and spool the silk, and also turn the reel at the same time! The result of such an attempt is an inferior article, and the sneers at American sewing silk continue to be well founded. Now it is found that well reeled American silk, (some of which is exhibited at this Fair,) is fully equal to the best Italian, which in the English market is worth from $5 50 to $6 per pound, and would *even now* pay the producer at least 100 per cent profit for exportation. What is the difference if this silk is badly reeled? Why, it would sell in the same market for about the same price which it cost to produce it here, viz: $2 per pound! this is now the price of some of the Bengal silk in the English market.

The English have become satisfied of the cause of

this difference, and are already introducing the Piedmontese reel into India.

The silk business has one great recommendation to us as Americans—it requires personal superintendence and care—it is well adapted to give employment to that portion of our population which, from the improvements in machinery, have been thrown out of employment—the silk reel will now supply the place of the spinning wheel, and give pleasing employment and support to a deserving part of the community.

The Committee are not averse to the introduction of machinery, for they are aware that with all the improvements which can be made, there will be still enough to employ all our manual labor, which has not other useful and profitable occupation: they wish, however, to encourage such as are really valuable and discourage such as are not calculated to benefit the silk grower and the country.

With these views, the Committee do not think the reel exhibited, No. 206 and No. 1285, are entitled to a premium, as not adapted to the advancement of silk manufacture or calculated for the use of silk producers, as the sewing silk produced on them, will not sell for any more or as much, when brought to market, as if simply *well reeled*, and the same manual labor applied separately to each branch of the business here attempted to be combined, will produce an article of superior quality.

The producing cocoons, and reeling silk, is properly the business of the farmer, the throwing, spinning, weaving, &c., the business of the manufacturer, and they cannot be advantageously combined any more than growing and spinning of cotton; there is enough for both to do, and both will derive larger profits from their respective employments, than they can possibly realize from uniting them together.

The Silk Doubler and Winder, No. 692, appears to be well adapted to the purposes intended, and the Committee think is deserving the notice of the Institute, although the exhibiter does not claim the merit as inventor, but as having made an improvement on the most approved machinery now in use in England, and as the first to introduce the same in this country.

S. M. McRay, W. A. Woodward, } *Committee.*

We fully agree with the authors of the above report, in the necessity of using *simple machinery* when reeled by the producers of the cocoons; and we willingly leave to the regular and more extensive manufacturer, his choice of plans for converting the cocoons into the finished fabric.

No. 1285.—*Silk Machine.*—This is a domestic machine of the character of the premium machine last year (Dr. White's). It is intended to obviate a defect in the twist, which in Dr. White's is not perfectly uniform without change of speed in some parts of the machine during the filling of a bobbin; but in this machine it is rendered uniform, by substituting an ordinary throstle spindle. This machine twists from the reel, and may be called an improvement upon Dr. White's; and although this improvement is nothing more than to drop a defect and substitute an old method, it is nevertheless an improvement, and in the opinion of your Committee, entitled to some merit as a good Domestic Silk Machine.

No. 692.—*Silk Machine.*—Your Committee consider this a useful machine for a manufactory in which winding, reeling, also reeling from swifts, and doubling from spools is practised. This machine has also a colleague machine accompanying it for doubling and twisting, in which are parts to note the breaking of a thread. Your Committee think well of the spool used by these machines being of tin. We recommend it as the best machine for manufactory use exhibited.

Upon the subject of Silk Machinery your Committee say, in conclusion, that they regret the absence of any thing decidedly new and important at the present Fair.

No. 19.—*Grist Mill*, of the class called Portable.—A small mill upon this plan is got up to be worked by hand, and may be termed a "Hominey Mill," for which purpose it is well adapted. We recommend it to the favor of the Premium Committee, as the best *Hominey Mill*. Another specimen upon this plan, called "Universal Mill for Grinding Grain." We pronounce it a good flour mill.

Cotton and Hay Presses.—There have been seven or eight varieties exhibited at the present Fair. Their importance is enhanced by the increased disposition to press hay for market.

No. 1204.—*Hay and Cotton Press.*—This press is an excellent one, and finest and best for a Cotton Packing Press, and deserving of particular notice. It is also a good Hay Press; but as a cheap press is the principal merit for their use, we present another as best.

No. 1136.—*Combination Power Press.*—This article has the qualities of a cheap, strong press for hay, and we pronounce it best for that use.

No. 1237.—*Lever Railway Press.*—This press is also intended for hay, and is second best.

No. 1301.—*Dynamometer for Machinery.*—This article was exhibited last year upon a smaller scale. The specimen now here is a large, well-built, and excellent article, suitable for measuring the power of the largest size engines; its use cannot fail to advance scientific mechanism. We bespeak for it particular attention.

No. 110.—*Revolving Stand Pumps.*—These pumps unite simplicity of construction with durability, convenience and economy. They are so constructed that the handle may be changed to any position; they are made of cast iron, cheap and durable—worthy of the favorable notice of the Premium Committee.

No. 989.—*Smut Machine*—This machine, for which a gold medal has heretofore been awarded, continues to be the best.

No. 25.—*Smut Machine.*—This is also a good article, performing its work well and rapidly, but in its construction more frail and less durable. In competition with No. 989, is second best. Entitled to notice as a good smut Machine.

No. 942.—*Smut and Garlic Machine.*—This machine is made upon the general plan of No. 989, with the addition of a coarse card rubber for cleaning garlic, for which purpose it appears to be well adapted, and entitled to particular notice as an improvement upon No. 989, both being the invention of the same individual.

New York State Fair Reports.

Maple Sugar *by B. Gauss, jr. of E. Bloomfield who received the highest premium of* $15. He manufactures from six to eight hundred pounds of Maple Sugar a year; and taps about three hundred trees. He boils in a sheet iron pan set upon an arch. When the sap is boiled to a syrup, it is then carried to the house, strained and settled; afterward it is put into a kettle, boiled and cleansed with milk and the white of eggs, until it will grain. It is then put into pans to drain; then put into boxes to drain. These boxes converge to a point, so that the molasses settles to the bottom. On the

surface of the sugar in the boxes, flannel cloths are placed, constantly kept wet with cold water. When sufficiently drained with these cloths, the sugar is melted over again, cleansed again with milk and eggs, and the same process gone through again with the flannel cloths. These cloths are washed every day to extract all the coloring matter from the sugar.

FOREIGN STOCK.—The Committee on Foreign Stock, would respectfully report:

They have had the pleasure of examining a grey four year old Norman Stallion, presented by MR. EDWARD HARRIS, of Moorestown, N. Jersey, and imported by that gentleman from France. This horse belongs to the breed used for the dilligence or stage coach in France, and although not decidedly fleet, they are remarkable for their bottom and endurance. It may indeed, he well doubted whether any other variety of horses would drag those cumbrous vehicles so great a distances in a given time. Like their descendants, the Canadian horses, they are easily kept, will feed on the coarsest materials, and are remarkable for their freedom from disease, and their iron hardihood and endurance under all circumstances.

Your committee consider Mr. Harris' horse one of unusual substance and symmetry, for the breed. The shoulder lies well back, the back is short, the whole conformation betraying immense strength. He has a great length and substance of fore-arm, and the limb below the knee is clean and short, for the character of the breed. He also displayed free and spirited action. Your committee cannot but believe that in its pure state, this variety of horses would prove one of the most valuable for heavy draft; and there is little doubt that crossed with the light mares of our country, would produce a peculiarly hardy and active race of horses, fit for the road or the plow.

The society were much obliged to HENRY WHITNEY, Esq. of New Haven, Conn., for the opportunity afforded them of seeing a few specimens of his fine Short Horn stock, his valuable imported bull "Rocket," by "Norfolk," out of "Carnation," bred by Mr. Hargrave, in England, and his red roan cow "Strawberry," an animal that attracted much attention for her substance, and general good appearance. More it would not become us to say, as she is engaged in a sweepstakes. His beautiful heifer "Cornelia," we understand to be also in a sweepstakes, and therefore feel it necessary to abstain from comment.

Your committee further had the gratification of viewing a fine specimen of the Duke of Leeds' stock, in the imported bull "His Grace," brought on the ground by PASCHAL MORRIS, Esq. of Allerton, Chester co. Pa. This animal was by "Anthony," out of "Vinea," she by Mr. Whittaker's Frederick, &c. "His Grace" is an animal of great substance, and much excellence. He was selected, as we are informed, by Mr. Whittaker, in England, and sent over to this country in 1838.

HENRY S. RANDALL.
FRANCIS ROTCH.
GEORGE J. PUMPELLY.

Jefferson County Agricultural Society.

Dairy.—"The committee on Farms and Dairies visited every town in the county, with the exception of Philadelphia. The committee examined forty-three farms, twenty-seven cheese, and ten butter dairies, and traveled more than three hundred miles. In the cheese dairies 829 cows were milked, and when examined, (from the 15th of August to the 1st of September,) they had made 197,734 lbs.; calculating the season to be three-fourths gone, they would make in all 263,545 lbs., which would be 318 lbs. to each cow. This, at 5 1-2 cents per pound, would amount to $17,49 per cow, and the butter made in the fall and spring from each of the same cows must amount to five or six dollars more. In the ten butter dairies 185 cows were milked, and they had made 15,020 lbs. Taking the aggregate of all the cheese dairies up to August 15th, each cow had averaged per day two pounds two and a half ounces of cheese; and the butter dairies, thirteen and a half ounces per day. Calculating cheese at five and a half cents, and butter at twelve and a half cents per pound, there would be a difference in favor of making cheese of about one and three-eighths cents per day, or one dollar and sixty-nine cents for four months. It was uniformly the case that the greatest quantity of butter was made from each cow, where the quality was the poorest. This goes to confirm the better opinion which already exists, that by letting milk stand until it becomes *loppered* the quantity of cream increases, while the quality deteriorates."

Washington Co. Agricultural Fair.

We are quite obliged to Dr. Asa Fitch, for sending his detailed and interesting account of the Washington Co. Fair, held at Salem, Oct. 11, 1842. We notice with pleasure, the large number of improved and native cattle and horses there exhibited; and the reports on the large crops of corn and oats, and profitable crops of winter and spring wheat. Of the latter, Washington Co. in former years, raised large quantities, but for a long time, the ravages of the Fly have been so destructive, as to have caused an almost entire suspension of its cultivation. In an excursion we made there the last season, we were told, that recent attempts had been more successful, which we trust, the later improvements of agriculture will enable them to realise fully.

Of Corn, 85, 80½ and 67½ bushels per acre were raised; Oats, 97 1-8 and 80 3-16 bushels per acre: and Potatoes 500 3-4 bushels per acre.

Domestic Manufactures, including *Silk*, make up a large item in the Fair. We must bring the ladies to our aid, if we expect the last can be properly developed; or indeed, if we rely on giving the full interest and effect to the annual exhibitions of our *home productions*; which, without their presence and co-operation, we cannot hope to inspire.

The Fine Wool Sheep were exhibited there in great perfection.

We should like to see a specimen of the *perfect Dynamometer*, constructed by the Chairman of the Committee on Implements, John Williams, Jr. of Salem.

ORIGINAL CORRESPONDENCE.

Agricultural Fairs for 1842.

From several of our attentive correspondents, we have received various notices of Fairs, some of which come in a printed form. We subjoin such extracts as our room will furnish.

For the American Agriculturist.

Berkshire Cattle Show and Fair.

GENT.—Having some business at Lanesborough last week, I made "one stone kill two birds," by transacting my business and attending the late Berkshire Cattle Show and Fair, held at Pittsfield on the 5th and 6th inst., being the 32d anniversary of this Pioneer Society.

The concourse of spectators, if not larger than heretofore, appeared much more respectable than I have noticed on any former occasion.

It was gratifying to witness the prompt and business-like manner in which the officers and committees attended to their respective duties, and it would be of

infinite service to the members of our State Agricultural Society to attend their meetings, and learn a lesson in the management. It is a truth, which every attentive observer will readily admit, that the arrangements are properly made and punctually carried out. And why should they not? Many of them have been members ever since the first organization, and most of them have grown up with the Society, and are as familiar with its details as they are with the details of their farms.

The show of animals, particularly working oxen and steers, exceeded any former exhibition which I have ever attended; there being one hundred and ten yoke on the ground of well-matched and well-trained cattle, mostly red, and in high working condition; yea, some of them more fit for the butcher than some I have seen slaughtered for beef in Albany. It was aptly said, in the report, that "there were but few among them that did not carry marked proofs that they came from a land of peace and of plenty, and were strangers to Pharaoh's lean kine." It was a most gratifying display.

The exhibition of cows and heifers surpassed any former show. They were in fine condition, and showed evident improvement both in size and form. I must, however, with all due deference, beg leave to differ in opinion with the Committee in awarding the premiums on cows. I saw none on the ground which I considered superior, if equal, to those exhibited by J. Clapp, Esq. His stock of cows, heifers, and calves, taken as a whole, were, in my humble opinion, decidedly the best on the ground, and one or two of his animals richly deserved the first premiums. His bull calf was a remarkably large and fat animal of his age; but too coarse in the head, neck, and legs, to breed from. His heifer calf was a little beauty.

The show of bulls was not only deficient in numbers, but in quality; only one worthy of notice, and to him the first premium was very justly awarded. If a little more attention was paid to the quality, symmetry, and style of their bulls, a great improvement would soon be apparent.

The swine, though not very numerous, were generally very good; and two of them would answer well to the portraits in a late London Farmer's Magazine, of the "Improved Essed Hogs," which took the first premium at the fair of the Royal Agricultural Society of England.

The sheep I did not examine, but understood they were very fair specimens.

The specimens of *home industry*, exhibited in the Town Hall, arranged as usual, with good taste, by Messers. Beebe and Colt, consisting of the handiwork of the ever-industrious daughters of Berkshire, bore evident marks of improvement. The specimens of cloth were unusually large, and of superior quality. A pair of white woolen blankets, made and exhibited by Mrs. Chapman of Pittsfield, exceeded any thing of the kind I ever beheld. The Empress of Russia might feel proud to possess them. A piece of flannel, made and exhibited by Mrs. Worden of Richmond, was much admired for its softness and even texture by all who examined it; so was also a beautiful piece of linen diaper, made by Mrs. Churchill of Pittsfield. The specimens of embroidery, presented by Mrs. Root and others, could hardly be excelled, and added much to the display, and furnished evidence that the females "whose home is among the hills and vallies," know what constitutes the elegancies as well as the substantials of life. In short, take it altogether, this exhibition of truly *domestic* manufactures would, I think, satisfy the most incredulous that we have the *ability* of rendering ourselves independent of foreign industry.

The number of competitors for the premium on butter was greater than at any former exhibition, which was accounted for by the reducing the quantity required from 100 to 50 lbs. There were thirteen lots offered, all of which were of superfine quality and put up in good order, and reflect great credit on the makers. There were only three lots of 100 lbs. each of cheese offered, but they were of rare quality.

The Fair of the "Young Ladies' Benevolent Society," in the evening was well attended and the room tastefully decorated with evergreens, which beautifully contrasted with white dresses and smiling faces. The tables were well filled and beautifully arranged—some with fancy and some with *taste*-y articles, too tempting to look at merely. And then, the way in which the keen eyes of the ladies who stood behind them, as saleswomen, moved about the room in search of customers, was a caution to those who had the wherewith about them. The cakes were excellent, and the ice-cream delicious. Sales, however, not as brisk and animated as heretofore, but full equal to the expectations of its friends. This closed the proceedings of the first day.

The morning of the second day opened with a brilliant sun, a clear blue sky, with scarcely a cloud to be seen, and at an early hour the sacred stillness which pervaded nature was broken by the busy hum of preparation for the most exciting and interesting part of the exercises—the Plowing Match, which was to take place at 8 o'clock. The field selected for the contest of the plowmen was situated about two miles southeast of the village, in the beautiful valley of the silent Housatonic, whose surrounding scenery of hills and dales were decked in Autumn's charming and varied foliage.

When I arrived on the ground, I found it surrounded on all sides by multitudes of both sexes, in anxious expectation of the coming contest. The field was laid off in lands of one-fourth of an acre each, and the time allotted for plowing that portion was one hour, with a rest of five minutes. There were 21 teams entered for competition, 13 horses and 8 of oxen. The longest time consumed by any plowman was 59 minutes—the shortest 35 minutes. Each plowman drove his own team and performed his own work in a manner which reflects great credit on our improved husbandry, and with that skill for which the plowmen of Berkshire are so famed.

It was with no small degree of pleasure, I found a large number of the improved plows of Messrs. Ruggles, Nourse & Mason's manufacture. All the premiums were awarded to the plowmen using these plows.

At 11 o'clock the procession was formed under the direction of the Marshal, and moved to the church, preceded by the excellent Berkshire band of music. The annual address was pronounced by R. F. Barnard, Esq. of Sheffield, the President of the Society, and was listened to with great attention by a large and very respectable audience. It was replete with sound sense, and confined, as all addresses of this kind should be, mostly to practical suggestions, and treated with great force and elegance.

After the Address of the President, the Reports of the several Committees were read by the Secretary, and the premiums, *in plate*, were delivered by the Treasurer, to the successful competitors.

After partaking an excellent dinner with the members of the Society, prepared by Messrs. Warriner & Cooley, of the Berkshire Hotel, I took my seat in the cars for Albany, well pleased with the success of "Berkshire's festal days." C. N. Bement.

Mr. B. V. French, of Mass., says the first Agricultural Society in the United States was formed at Philadelphia during the last century. Will Dr. Jas. Mease, of that city, who we believe was the secretary, give us the particulars of its formation, date, &c. ?

We are promised some interesting particulars of the old New Haven Ag. Soc., organised by the late Col. Humphreys, Eli Whitney, and others, about the year 1810, from a gentleman now a resident of that city. The rival claims for the *birth-place* of these popular meetings, in the U. States, should at once be settled in favor of the rightful claimant, or after generations will assign them a more diversified origin, than was claimed by the seven cities of Greece, for the honor of giving Homer to the world.

Fair of the Hampshire, Hampden, and Franklin Agricultural Soc. of Mass., held at Northampton 12th and 13th Oct., 1842.

The Reports of the Committees of this Society are full of interest and instruction. The first, on Manufactures, states, that "the collection this year, in number and value, exceeds that of either of the three or four preceding years; and they hail this as a sign of renewed interest in this important branch of production, on the part of the people of the Connecticut River valley. The Committee regard the increased display of domestic manufactures which this year greets us, as a cheering indication that the baneful spirit of speculation is giving way to a more sober and more useful temper. For some years, too, these all-important branches of industry have not received that fostering care from the government which had previously been extended to them, and this may have been one cause of the decay of interest in them. When any branch of industry ceases to be profitable, it will cease to be followed. But if the signs of the times do not mislead us, the care and aid of the government, so much needed by our domestic manufactures, yet in their infancy, and so essential to develope the full resources of our country, will not hereafter be withheld; and we anticipate a constant and steady increase of the prosperity of these branches of industry."

Among the articles enumerated were the Fancy wove cloths from the Northampton Woolen Manufacturing Co., home-made Beavers, blue Domestics, satinets, rose blankets, flannels, carpets, hearth-rugs, counterpanes, linen diapers, gloves, mittens, hose, and all the paraphernalia that make our Yankee houses and their industrious and intelligent inmates so tidy and comfortable, without the necessity of going across the ocean to purchase from foreign labor what they can better supply at home.

"Of silk the supply was not so great as might perhaps have been expected. Only two entries of sewing silk were made; and though there were five entries of raw silk, the Committee found but three specimens.

"No. 2, (by Northampton Association) of sewing silk was a superior article—the colors brilliant, and the silk every way well made.

"No. 1, (by Mrs. Martin B. Graves) was apparently made by hand, and commendable for the industry exhibited.

"The raw silk was all good. No. 2, (by Northampton Association) was particularly noticed as a beautiful article. No. 4, (by Dr. Bardwell of Whately) too, was excellent silk.

"Your Committee cannot but hope that the day is not far distant when attention will be more generally turned to this branch of production. The bursting of the mulberry speculation was of course calculated to check for the time the silk culture. But that has passed by, and though certainly a salutary lesson against plunging into wild enterprises, there can be no reason why it should longer operate to check the development of the real wealth and resources of the country. And the fostering care which Government appears now willing to extend over this, as over other species of industry, must, as your Committee hope, warm it into vigorous activity.

"The history of the silk culture in France is full of instruction, and full of promise, for us. The first efforts which were made to establish the culture there, completely failed. The fabric first produced was rude of course—no one understanding the mode of operating, and the better made and cheaper silks of the East coming into the French market, and competing on equal terms with the home article, drove it out of the field, and ruined all who had embarked in the enterprise. But after one or two attempts had thus been made ineffectually, the Powers of the time saw the importance of encouraging and fostering this branch of production. The Government extended over it the shield of protection, and it almost immediately sprung into new activity and vigorous life. In a few years the home market was supplied by the home-made article; and now France sends her silks on the wings of the wind to almost every quarter of the globe. We purchase of her yearly to the amount of millions.

"But there is, the Committee believe, no reason why we should be dependent upon France for our supply of silks. In parts of our country the soil is well adapted to the mulberry, and the climate agrees well with the silk worm. What possible reason can be assigned why we should not raise and manufacture this article to the extent at least of our own consumption? France has an advantage, some one may say, if not in her soil and climate, yet in the price of labor there. But when we consider that much or most of the labor could be performed by old persons, by women and children, this objection loses all its force.

"The excellencies of Wilson's newly invented patent Lock, which bids defiance to skeleton keys and all the contrivances of the pick-lock and the burglar, we have not space to detail. But we should be doing an act of injustice, if we let it pass without paying a tribute to the excellence of the lock and the ingenuity of the inventor.

"We should by no means do our duty, if we closed our report without noticing the display of tasteful and beautiful articles of domestic industry—of *domestic* industry in the strictest sense of that term—which adorned the upper part of the Hall—the offering, for the most part of fair hands here in Northampton, to benevolent and charitable purposes. The execution of these beautiful articles, some of them exceedingly beautiful, does as much credit to the taste, skill, and industry, as their object does to the kindness and good will of the makers. Considering the brief time which the ladies have had for preparation, their success is deserving of the highest praise.

"As a whole, the Committee repeat, that they are much gratified with the Show which has this year been offered of articles of Domestic Manufacture. They cannot but regard the increase in their number and value, as an indication of a return of interest in, and prosperity for, these exceedingly important branches of production. We trust that this interest and prosperity will go on increasing, till the hopes of the most sanguine in regard to them have been fulfilled. The increase of domestic manufactures must have a most important and beneficial influence on the general prosperity of the country. For the *Committee*.

"Daniel Wells Alvord."

The Report on Stock is spirited, practical, and sensible:—

"The Committee have shared largely in the regrets of the members of the Society at the indifference which, for a few of the last years, has thrown its paralyzing influence over their operations. Notwithstanding the unwearied efforts of a few staunch friends, the cause waned, and year after year presaged a near approaching nadir.

"It is with feelings of a very different kind that the Committee are now enabled to meet the friends of Agriculture in the counties of Old Hampshire. The present anniversary bears unequivocal testimony to the fact that a new energy is aroused, and that the sons of the founders of this institution have determined to perpetuate and increase the benefits of a Society upon which their fathers spent so much labor. The increase of animals and household manufactures presented for exhibition, and of the assemblage of farmers on this occasion, encourage us to hope that a new day has dawned upon us. Such meetings are needful to every farmer. How can they, as a body, learn the benefits of a particular method of culture over others, but by coming together and interchanging their views and recounting their mutuul experience on the subject? How judge of the best animals for stock, but by bringing them together and comparing one with another, selecting the forms best adapted to our soil and use, and breeding from them? There is more in such a meeting than the mere excitement of the occasion. The plans and method of the successful cultivator are carefully studied and imitated. The causes of failure in others are as carefully sought out and avoided. On our best cultivated farms a rotation of crops has been introduced, and this has mainly been done by the conversational meetings of the Society, together with the circulation of Agricultural reports and newspapers. To a great extent, the worst forms of our native stocks of cattle, sheep, and swine, have been driven out, and fine crossings or full bloods of the best foreign animals introduced in their stead. This change must be attributed to our annual fair. All knowledge relating to the theory and practice of agriculture should be a joint stock concern—a full fountain, into which every farmer may introduce a pent stock, and draw out as his wants and inclination require.

"In number, our farmers exceed all other classes of the community. They wield the destinies of our state and nation; they are the great producers, all other classes being dependent upon them for most of the necessaries and comforts of life. *The farmer, then, should be a reading, thinking, working man.* He will take rank among his fellows, according to the measure of knowledge and skill which he exercises in his vocation and among others according to his general information and virtuous conduct. Nearly all our professional men and mechanics come from the farmer's fireside, while the sons of the professional men and mechanics are ever sighing for 'the good old days of Adam and Eve.' These changes will bind us all as a brotherhood together, and ever operate as a check upon a spirit of exclusiveness which might otherwise spring up between the several classes. The farmer has a deep interest in our common schools, our academies and seminaries of learning,—in the institutions of religion and benevolence,—in the libraries, book-clubs, and Lyceums. He should set the standard of intellect and of virtue high, and encourage all to come up to its full measure.

"The Committee cannot close their report without recommending to the Society the immediate adoption of measures for the increase of members and usefulness of the Society, and we consider the present as an auspicious season for such a work.

"For the Committee,

"Samuel Wells, Chairman."

The Reports on *Horses* and the *Plowing Match* are good, but we have not room for them.

Fair of the Hartford Co. Agr. Soc., held at Hartford, Conn., Oct 8, 1842.

The Report of the Committee on *Farms* is peculiarly full, minute, and instructive. They carefully examined *nine* different farms, and from testimony collected on the spot, have made out the exact profit on each, after deducting all the costs of production, seed, &c. The result is, that three farms pay an interest of 12 per cent. on the capital; another, 12 5-16 per cent.; another, 13 3-4; another, 10 1-2; another, 13 3-8; another, 11 1-2; and the lowest, 10 per cent. What other business, as secure, has paid an average profit approximating to this? And when will intelligent farmers learn that their profession is not only the most ancient and honorable, but, on the whole, the most profitable pursuit of life; and that, instead of educating their sons for the professions, and the various trafficking operations of life, which are already overflowing, they would consult reputation, honesty, health, comfort, and wealth, by thoroughly fitting them for the duties of the farm?

The Report on Reclaimed Lands.—A novel, but very interesting report, which we trust may hereafter be imitated, we subjoin at length.

"The first piece belonging to Mr. Samuel Deming, of Farmington, is situated between the two ridges of mountain, east of the village; containing about 3 acres. When he came in possession of it about four years since, it was a bog pasture, producing little but coarse sedge grass, and low brakes. He commenced his improvement by cutting the bogs and putting them in stacks; the following winter they were hauled to his barn-yard and hog-pen; afterwards, when mixed with manuure, put on to a light plain soil, to great advantage. The next year he sowed it with herds grass and clover, manured a part of the piece with barn-yard manure, which produced a large burden of good quality, while that not manured produced little, and that of little value; the next season he manured the remainder with like success; the past summer, although uncommonly wet, it produced a good burden of a good quality of hay. The expense of cutting and stacking the bogs, Mr. Deming estimates at $2 25 per acre, and that the benefit he received from them on his plain lot, would compensate him for removing them.

"The next piece we examined is situated on the south road leading from Hartford, about two miles east of the village of Farmington, owned by Ira Bowen, containing about 6 acres in all; about two acres mowed this season, one acre sowed with buckwheat, the remainder now in progress of improvement. Before he commenced his improvements, he considered it of little or no value, an evidence of which is now to be seen; the former proprietor having some years since, hauled, in the winter season, when the swamp was frozen, some hundreds of loads of stone from the adjacent upland into this swamp, to get them out of the way, where they are now to be seen, surrounded by handsome mowing. From this lot Mr. Bowen estimated he cut over two tons of herds grass to the acre, the past summer, at one cutting, without the aid of any manure. He has bestowed much labor to get this land in its present state, in ditching, digging out the stumps and roots, cutting the bogs and burning them; but the actual expense he is not able to give, as the most of it has been done by

himself and his usual hired help, when his other farming operations would permit; he thinks it would not exceed $15 per acre, and the land that is in grass to be worth from $100 to $150 per acre.

"The third piece examined by your committee is situated about one mile south of the meeting-house in East Hartford, between the road and the Connecticut River owned by Mr. Horace Williams, containing between one and two acres; is a swail of wet cold upland, filled with bunches of rushes or round grass. Mr. Williams, by draining, has been able to plow it, and got a fine crop of corn on it; this piece is well situated for under draining, a mode in our opinion, if our farmers would practice more, they would find great benefit from.

"The last piece examined is situated in the south-east part of East Hartford; is owned by Mr. Ira A. Kimball, containing between 1 and 2 acres; your committee would here remark that they have been particular in describing the situation of the different pieces viewed, hoping that our brother farmers will examine them, and follow the example set them. This piece was a low miry swamp, covered with moss; but by surrounding it with a ditch, he has drained and plowed it two years; the last year, he put on buckwheat; this year, corn and potatoes; and by way of experiment, a patch of carrots and tobacco: his crop looked well, and the cleanest from weeds of any seen by the committee this season; when Mr. K. commenced on this piece, his neighbours rather ridiculed him for attempting to do anything with it; and tauntingly asked him to engage to them buckwheat for seed; but he seems to be a man of too much resolution to be discouraged by such means. The expense of reclaiming it, he considers but little, as he performed the labor himself, with the aid of a boy 12 or 14 years old—except the plowing, which he was compelled to hire, as he had no team, except a single horse, with which he hauled the muck that came out of the ditches, into his barn-yard and hog-pen, afterwards putting it on his light sandy soil, to great advantage.

"In conclusion, your committee would remark that if what was long since said by a writer on Agriculture, be true, that "He who makes two stalks of grass grow where but one grew before, deserves more of his country than he who subdues kingdoms," then he who makes acres of luxuriant grass grow where none grew before, deserves more encouragement from this Society, than the offer of a single premium of $10, and believing as they do that there are hundreds of acres in this county that now are of little or no value except for muskrats and bull-frogs to gambol in, that might be made as profitable as any land the farmer owns, they would respectfully recommend that the Society in future offer three different premiums on Reclaimed Land; and likewise increase the number of the committee, as they think that any farmer would be compensated for his time spent in performing this duty, by stimulating him to go and do likewise."

The Report on *Domestic Manufactures* is full and gratifying, and nowhere in the United States do they exist in greater variety and perfection than in this county. *Two additional Reports on Working and Fat Cattle, and Agricultural Products, and the Dairy, with the awards*, complete these instructive proceedings.

New-Haven County Annual Fair.

This veteran society, first organized in 1810, by some of the choicest spirits of the age, Col. Humphreys, Eli Whitney, Hon. James Hillhouse, President Dwight, and others, was held in New-Haven, on the 28th and 29th Sept. last, and in a style that would have gratified its illustrious founders, had they been present. *Ten thousand* were supposed to have witnessed it. The working oxen were estimated by acres, as near as we can judge. They came into the city by detachments of 20 to 132 yoke each, and when arranged in a hollow square, (for the city was not long enough to hold them in a straight line,) they formed a coil which, had it been unwound, would have extended one mile and three fourths. *One thousand and twenty-six working oxen*, each of superior form and appearance, "of a deep, glossy, red color, and in fine working order," attest what care and attention can do, with materials already in our hands, when properly directed. The Farmer's Gazette says:—

"In addition to the working oxen, there were about 100 head of other stock, of foreign and domestic blood; with horses, sheep, and swine, which occupied two rows of stalls extending through the avenue formed by Temple-street, on the west side of the parallelogram. This part of the exhibition was not equal in improved blood to what it was last year; and some of the best stock in the county was absent at the New-York Cattle Show, at Albany. There was a trial of strength by a number of teams on the Green, which excited a deep interest in the spectators. The load and cart weighed 5,400 lbs., nearly two tons and three fourths, which was drawn without any apparent extra effort, by several single pairs, on ascending ground.

"Take it altogether, it was doubtless the most imposing spectacle of the kind ever witnessed in the State.

"The Plowing Match, on Thursday, was attended by three thousand people, as estimated by good judges present. Though the number of competitors which entered the field was not large, the interest excited was intense. The field was a square of about 20 rods, on which the plowing was performed. The ground was marked out into lands of one-eighth of an acre each, and was accomplished by one team, of one yoke, in 26 minutes, by another in 27 1-2, and the longest was only 32 1-2 minutes. Such was the zeal excited by the strife, activity, and skill of the plowmen and their teams, that, at the close, a general shout of approbation was sent up by the multitude, which made the welkin ring again.

"The exhibition of Agricultural and Horticultural productions, in the State House, was a magnificent and sumptuous display of flowers, fruits, vegetables, and grains, arranged in elegant order. The great entrance Hall, by the generous aid of the fair sex, ever prominent in a good cause, was tastefully dressed with flowers, evergreens, statuary and paintings, and lighted in the evening with numerous lamps, which, with the sweet harmony of Mr. Metz's band of music, formed altogether quite a Fairy scene.

"The six spacious rooms on each side of the Hall, were occupied with rows of tables around three sides of them, which were covered with a great variety of fruit and vegetables of superior kinds. The large City Hall in the basement was filled with vegetables, grains, agricultural implements, and products of the dairy.

"The wonderful improvement in Horticultural skill and science, which this anniversary has evinced, speaks much in favor of such exhibitions, and those who have sustained them. The house was thronged to overflowing during the hours of exhibition."

With this we must close our notice of agricultural fairs for our present number. Long may the worthy farmers of our happy country, enjoy such peaceful triumphs of their labors, and long continued to them be the annual return of these gala days, refreshing their virtuous minds, and re-invigorating their hardy frames, with the healthful and innocent excitement of their God-chosen and God-blessed occupations!

Rearing Grapes and Strawberries.

The following highly interesting letter from Mr. Longworth should be carefully read by every one engaged in rearing grapes and strawberries. Mr. L. has introduced and carefully improved, some valuable kinds of the native grapes, and being not only an extensive and practical cultivator, but also a close and intelligent observer of the character and habits of the delicious fruit upon which he treats, his statements are to be taken with entire confidence.

He will please accept our thanks for this letter. We shall be pleased to hear frequently of the result of his observations and experiments on these and similar subjects from his own pen.

For the American Agriculturist.

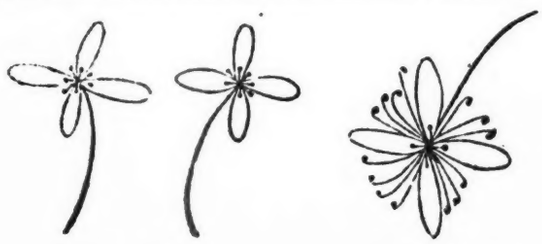
Cincinnati, September 30th, 1842.

GENT.—The vintage is over, and the expectations we formed in the spring have not been realized, from the rot among our grapes. The season has been cold and wet, and I did not anticipate a rich must; but in this respect have been agreeably disappointed. The juice is as rich as at any preceding vintage. I have thirteen vineyards and more under way. The greatest yield in the county is at the vineyard managed by Mr. Mottier, who is well known as an intelligent, enterprising vine dresser. He made within a fraction of 1500 gallons. A part of the vineyard that did not suffer by rot, yielded 600 gallons to the acre. The next vineyard in its yield, is under the charge of Mr. Myers, an intelligent German, of much experience in the cultivation of the vine, and its manufacture into wine. There were some vineyards in the county that produced a more abundant crop, on the same quality of ground, than even Mottier's. Mr. Hackinger had the finest crop I have ever seen. The crop of Mr. Reser, was also very abundant. I have been informed that several other vineyards in our county, were but little injured. The vine culture is yearly increasing with us, and the day is not distant, when the Ohio hills between the two Miamies, will rival the same extent on the Rhine. For this, we shall be chiefly indebted to our German emigrants; and they are gratified in stating that we can rival the wines of their own country. The Catawba is destined to make a dry wine, equal to Hock, and one of my German tenants, Mr. Lock, has made a sparkling wine from it, equal to the best Champaign. But we must not expect to succeed at first. The process of fermentation and manufacture of wine, requires both experience and skill, and we shall not for years equal the wine coopers of Europe in its manufacture. The dry Hock wines require but little experience and skill, but this is not true in respect to many of their finest wines. I propose this fall to send samples of my wines to the Horticultural Societies of our principal cities, in the hope that it may tend to increase the culture of the grape.

You might benefit some of your readers by drawing their attention to the proper cultivation of the Strawberry. In a late number of Hovey's Magazine, I discover that Mr. Allen, of Winchester, Virginia, takes exceptions to a remark of mine, that I have never met with an English gardener who understood the cultivation of the strawberry, though his own declarations in the next sentence, prove the truth of my observation, from his own want of information on the subject. I wrote to the Horticultural Society of London, on this subject, and drew their attention to it, about four years since, and discover that some of their late publications sustain my views. I do not state what I merely *believe*, but what I *know*, after twenty-five years' experience, that it is in vain to attempt the cultivation of the largest and finest varieties of strawberries, without regarding the sexes of the plants. In the Hudson, which is admitted to be the most valuable of all strawberries, it amounts to a complete separation of the sexes, and one acre of either alone, would not perfect a single fruit.

Hovey's Seedling, without male plants, is so defective in the male organs, as not to produce by itself, a perfect full-sized fruit. In the white and in the monthly varieties, the male and female organs are perfect in the same blossom; but when this is the case, the fruit is never of the largest size. Wilmot's superb, and some other large varieties, are perfect in the male organs, and so far perfect in the female organs, as to produce some large and perfect fruit, with many small deformed ones. The female of the Virginia Scarlet, will not, by itself, produce fruit—its male will produce about half a crop, of small fruit. Mr. Allen appears to deem that my plan might answer, when the object is to raise a few strawberries only, (as he presumes we do in the west,)but would not do at the east, where the object is to raise 25 or 30 bushels. My tenants pay but little attention to the strawberry, and merely cultivate some between their grape vines, in parts of the vineyard, but one of them sells yearly, more than four times the quantity named by Mr. Allen. But we have some individuals that I presume may compete with any Horticulturists about Winchester. Mr. Culbertson sold from his own ground, in our market last summer, some days 100 bushels of strawberries, principally the Hudson, and he was enabled to do this by his knowledge of the male and female plants, and his attention to the subject. I am truly surprised that Mr. Allen, or any other horticulturist, should doubt the principle, for it is not a new theory originating with me, but learnt from an ignorant German female market gardener, who for thirty years, both at Philadelphia and in our own vicinity, had been celebrated for raising five times as many strawberries as her neighbors, from the same quantity of ground, and of much larger size.

On investigating the subject, I was surprised to find that Duchesne, Ehrhart, and Duhamel, and all Botanical writers on the strawberry, since the days of Linnæus, fully sustained the theory and practice of the old woman, though I could not find a botanist among my acquaintance aware of the fact. For years I could not from one-eighth of an acre raise enough of the Hudson Strawberry for my own family. I can now do it from one-tenth part of the ground. There is one variety of strawberry, and one only, that I am acquainted with, that produces large fruit, that is perfect in both the male and female organs. It is of the Pine Apple family, and came from the garden of Lafayette. There are but few who would admire the fruit. I send a sketch of the male and female blossom of the Hudson, which will equally apply to other varieties, though the same difference in the size of the blossom does not exist in all species or varieties. The most careless observer will at once discover the difference when the plants are in blossom. About one male plant will be required for ten of the female, and there will be a saving to have such males as will produce some fruit. I have a new variety from the prairies of Iowa, perfect in the male organs, and so far perfect in the female, as to produce a fair crop of very large fruit. I shall send some to Mr. Buist of Philadelphia, Mr. Thorburn of New York, and Mr. Hovey, of Boston, and shall with pleasure send plants to any person who would wish to procure them, if they have friends here who will call for and forward them.



Female Hudson. *Male Hudson.*

The male organs are always attached to the hull, and the female to the stem. By separating the hull from the stem of the female, the male organs will be discovered, though not before perceptible; whilst in the male, they may be seen at the distance of twenty feet. I would recommend all persons wanting faith, to refer to Rees's Encyclopædia; article, Fragraria.

Since writing the above, M. Mottier has made brandy from the mash (pomace) of the Catawba and Schuylkill Muscadell. At my suggestion, each kind was kept separate. The brandy from both promises to be of fine quality, but that from the Catawba, I doubt not, will rival the best brandy of France.

With regard, yours,
N. Longworth.

The writer of the following article was, for many years, a practical farmer in England, and has since, been more particularly engaged as a practical chemist. He has constantly, however, been an observer of Nature's operations, which he has been the more successful in detecting, as many of the manipulations of the chemist, are only acted over on a larger and more varied and complicated scale, in the out-door laboratory of the universe. His remarks are of a thoroughly practical, and therefore of the most useful character. We are promised a continuation of them, till most of the sources of fertilization afforded in our city are indicated to the farmer. We think it is unnecessary to mention, that although these observations have particular reference to this and all large cities, yet its principles are applicable wherever the materials mentioned are found.

For the American Agriculturist.

To our Farmers who obtain manure from the City of New York.

It is a long time, at least forty years, since I was practically engaged in farming, yet I retain a strong predilection for that interest, and shall at all times be ready to render it any assistance in my power. Your pursuit, my friends, is superior to all others; it is the very foundation of national prosperity, and would be supported in preference to any other interest in our country, were our legislature willing to appreciate your intrinsic value. The present is considered by us, as superior to more ancient ages, yet among the ancients, kings and princes devoted their attention to agriculture, promoting that interest as superior to all others. The modern kings, emperors, and legislators of Europe, are now pursuing the same course, and it is only our Republican America that hangs back in refusing a small pittance for establishing colleges for your instruction. This will be considered a foul blot on our national escutcheon, if not soon removed.

I observe that our farmers, in taking manure from our city, collect only the street dirt and stable manure. My view in writing this article is, to point out to them other more valuable fertilizers, now totally neglected by them, which I shall mention separately, and comment on each as I proceed.

All the fertilizing properties in manure, are the soluble portions, and by far the best of our street dirt is carried into our rivers by every rain that falls. In preparing soil for land, two distinct objects are to be kept in view; first, that the most fertilising materials be collected; and second, that a sufficient quantity of materials be added to absorb and retain the fertilizing portions. I shall call the first the food of the plants, and the second the cellar in which it is preserved, to be used as wanted. In drawing your attention to the fertilizers now thrown away in our city, I shall endeavor to recommend the best retainers to be used, after explaining the elementary properties of each material. In doing this, I shall avoid, as much as possible, all technical terms, using in every possible instance, the plain farmer's language.

I shall begin by drawing your attention to the offal of our fish markets. This is now thrown into our rivers and lost. You are all aware of the value of fish manure, and yet this large supply is daily wasted. I have conversed with our fishermen on the subject, and they all assure me, they would be glad to have it taken away, if it could be done daily. I have no doubt that tons of this offal could be daily collected. As our fish markets are all on the borders of our rivers, it would be easy to collect it if suitable arrangements were made by the collector.

The next object for the farmer to attend to after collecting this offal, is to save and apply it in the most effective manner. Our farmers generally strew fish on the land, and work them into the soil in the best manner they can. In following this mode of application, they lose nine-tenths of the fertilizing qualities of the fish; as all the ammonia formed by their decomposition, excepting the small portion absorbed by the roots of the crop then on the ground, will evaporate and be lost, at least to that farmer. I say to that farmer, because it is more than probable that it will be brought down again by rain or snow on the land of some of his neighbors. I presume, however, that those who use fish for manure on Long Island or the Jersey shore, do not wish nine tenths of its fertilizing quality to fall on farms in Canada or Florida, or the Atlantic ocean, or wheresoever the wind may direct it. I have been informed that some of our farmers have put fish in their barn-yard manure, and did not find it more beneficial to their land than when the fish were applied to it as before described. This is no more than any chemist would expect, as there is nothing in their usual manure heaps to retain the ammonia—so far from it, the most valuable portion of their manure also evaporates, for want of ingredients being added to them capable of absorbing and retaining the ammonia. The best known materials for this purpose, are Charcoal, Plaster of Paris, and the Acids. There are but few farms that do not afford brush-wood in sufficient quantity to burn into charcoal for the use of their manure heaps, by which all the ammonia from their cattle, horses, and other stock, would be saved, as well as that from fish or any other animal matter added to their dung-heaps. I would recommend our farmers to put plenty of it into their hog-pens. Those farmers who cannot have access to charcoal may use plaster, as this also will retain a large quantity of ammonia, but is every way inferior in its power of retention to charcoal. Besides, charcoal is one of the most durable of all applications to land, its good effect having been experienced twenty years after a liberal supply has been put on. It appears not to waste when used as a soil, and if it does, it is so slowly as not to be perceptible. So long as it retains its qualities of charcoal, so long will it retain its power of absorbing ammonia, and giving it up to the plant when required. A charcoal dealer offered to

supply me with the dust at two shillings per barrel if I found him the barrels; but I had just engaged two sloop-loads for carting away. A friend living at Williamsburgh, has lately bought a large quantity at the above price.

The next articles I shall call your attention to as valuable fertilizers, are the broken brick, and lime rubbish, of buildings pulled down in New-York and Brooklyn. This, heretofore, has been carted away to fill up docks and low grounds, but I hope soon to see it applied to the land. We send to Nova Scotia for plaster, freight it from thence, cart it to plaster mills, and grind it fine for agricultural application; yet the bricks and mortar, possessing far greater fertilizing powers, are thrown away. Let some of our plaster grinders collect these materials, grind them coarsely, and sell to the farmers, and I predict that in a few years it will be more sought after than plaster.

I was told by a farmer I met at the Albany fair, who came from near Boston, that he owned four acres of land, which more than forty years ago was covered with brick-kilns; that this land had been in possession of his family ever since, that they had taken off great crops of natural grass every year, without adding any manure or soil, and that this year he had cut from it two and a half tons of hay per acre at one mowing. These observations were elicited by my having recommended burnt brick as manure, in the Cultivator, some months before.

Bricks contain roasted alumina, and silicate of potash. The first produces one of the best of soils, and the second forms a portion of all grass, straw, grain and corn. Wheat contains more of it than any other grain.

A Chinese farmer will scrape the plaster off rooms, and re-plaster them at his own expense, for the sake of applying the old plaster to his land; yet in our highly intelligent country, we permit hundreds of tons annually to be thrown away rather than take the trouble to collect it. Old plaster contains more or less of nitrate of lime, which is a most valuable manure.

On the 11th of the present month I noticed a carman carting away a large heap of plaster, and he told me it was used to fill up a dock. Thinks I to myself, they might as well fill that dock up with hay, as to fill it with a material that will produce more than its own bulk of hay *annually*.

WM. PARTRIDGE.

N. York, Nov. 14, 1842.

We extract from a letter received from Dr. M. W. Phillips, dated

"*Log Hall, Amsterdam P. O. Mi.*
Oct. 22, 1842.

"In one of your numbers, the "Bermuda grass" and the kind cultivated by Mr. J. J. McCaughan, on the sea coast, are spoken of as being different. I have some of *both* of these now in my yard, they are to my judgment identical—both having leaves and *seed stalks* precisely alike, Mr. McC. being kind enough to send me some, on the ground of his being the "Simon Pure" and not seeding, but here *it has seeded*, and is the same.

We are all as busy as bees, gathering our crops. Immediately in this neighborhood, our crops are good. I shall make 6 to 7 bales cotton, and 250 to 275 bushels of corn per hand, with sweet potatoes, peas, forage, &c. in abundance. I do not plant for a cotton crop, having got a few Berkshires, part bred Durhams, &c. that I am trying to provide for, but think ere the year closes, that my nett proceeds will not be far behind the most of them. I am inclined *now* to think the cotton crop will be an average one. A short time since I did not think so; but the yield of wool is greater than has been for years. I ginned out 393 lbs. of seed cotton, and weighed 132 lbs. of clean cotton. I did all the weighing and ginning *myself*."

For the American Agriculturist.

GENT.—The following is a receipt for curing hams, which I tried last fall, and found superior to several other modes I had before tried, the hams and shoulders being far sweeter and better flavored, and preserving well through the summer.

"Dissolve two ounces of saltpetre and two teaspoons full of saleratus in strong brine, for every sixteen pounds of meat; boil and skim, the above thoroughly, and add molasses in proportion to one gallon for each hogshead of brine.

"Let the meat remain in this pickle three or four weeks, then smoke with hock downward."

Packing hams in oats in such a manner as not to allow two to come in contact, preserves them in a much better condition than any other mode I have seen practiced.

Yours, &c.,
C. STARR, JR

Mendham, N. J., *November*, 1842.

To Correspondents.—The account of the Genesee Co. Fair was received too late for insertion in this number. It will appear in our next.

The letter from Solon Robinson came too late for insertion.

SELECTIONS.

(*From the New Farmers' Journal.*)

Natural Silicate of Potash, for Manure; in Felspar and Granite.

On a future occasion I may have something to say about the nitrogen; but my present object refers to potash, which being drawn from the soil by every crop, requires constant renewal. Wood ashes are not produced in this country, in sufficient quantity; burnt weeds and leaves, and the farm-yard straw returns only a part of what was drawn from the soil; the potash in the food, both of man and beast, coming off chiefly in the liquid excrement, and running to waste, not only in town sewerage, but too often in farm-yard drainings. Leibig's artificial silicate of potash, referred to by Mr. Trimmer, for agricultural purposes, may be more likely realised in the woody districts of Germany, than in our coal-burning country, where the potash itself seems to be wanting.

There is, however, in our vicinity, an inexhaustible store of this alkali; though not hitherto thought of as a manure, nor in its present hard and durable state, fit for the purpose. If slate and dunstone contain potash enough to fertilize their soil, felspar comprises it in much larger proportion, about 17 per cent. of its weight; and felspar is the basis of Dartmoore granite. This granite may contain about 10 per cent. potash (varying, of course, with the proportion of felspar), in too hard and compact a state to yield to the weather, fast enough for the purposes of manure. But this hardness is not difficult to reduce. By turning it whilst red hot, into water, it is rendered quite brittle and crumbly; and being then mixed with fresh lime and water, is made much more susceptible of decomposition; and easily yields part, at least, of its potash. The surface granite, already softened by the weather, will not do, having already lost a part of its alkali; China clay, apparently decomposed granite, is almost entirely destitute of potash; and the soils formed upon granite are unproductive, probably from the same cause.

The chippings and fragments of the solid stone accumulating at the granite quarries, may be heated with turf, in the common lime kilns, and raked down into water, as fast as they get red hot; in which manner many tons yer day may be done in one kiln. Thus rendered brittle, it may be rapidly crumbled by a water power crushing mill. And as turf and water power are both plenty about the granite, this rough powder might be sold to the farmer at a lower price than lime.

A ton of this powdered granite mixed with a ton of fresh lime, being heaped on a thick bed of earth, and closed in all round with earth, leaving the top open; water is to be poured on gradually, enough to slake the lime entirely, and then all covered in; the bed of earth at the bottom being one or two feet thick, and round the sides eight or nine inches; making good the cracks produced by the swelling of the lime in slaking. After two or three days it may be uncovered; the granite and slaked lime well mixed up with water, to a soft mortar; and again all covered in close with earth. In this state it may be left two or three months at least, and better if longer; keeping it wet and soft. When wanted to use, the whole heap should be well mixed together, including the earth, which will be impregnated with solution of potash. It is then fit for spreading.

Two hundred weight of granite will contain as much potash as a good acre of wheat (say thirty bushels) including the straw. Hence a ton, prepared as above, might do (reckoning the time required for decomposition, and the other manures employed,) for two or three acres of light soil, once in four or five years. Loamy and dunstone soils are not likely to want potash so often. But in an article yet untried, we cannot recommend proportions with much confidence. Experiments, at first in a small way, with different proportions, on different parts of a field, exhausted of potash, but not of humus, and not over-limed, giving the whole about one hundred weight of bone dust per acre, or a ton night-soil, that the crop might not fail for want of phosphates, would furnish some indications for future guidance. Its durability must be determined in the same way; of course the faster it is decomposed, the greater will be its early effects, and the less its permanency.

The object is to convert the hard crystalline alumino-silicate of potash into a crumbly calcareo-silicate of potash, much more susceptible to moisture and to the weather. Thus prepared, it yields its potash very slowly; and if required more active, it may be melted in a reverberatory, with 10 per cent, of salt; but this would add so much to the cost as to pay only where granite or felspar requires long carriage, and where fuel is cheap. In general it would be better economy to make up the activity by quantity, and thus get durability at the same time.

Basalt, or any other rock rich in potash, will answer the purpose where granite or felspar is too distant for carriage. I am, &c.

October 4th, 1842. J. Prideaux.

A new variety of Cotton.—We have upon our table a specimen of an improved kind of cotton, which is the result of experiments with the Oceana, Mexican and Egyptian, of which it is a mixture. Dr. Lovelace of Wilkinson county, who is the propagator, furnishes with the specimen, only a few of the particulars with regard to the plant, which we would be glad to know. He says:—"The hybrid plant, which for the sake of distinction, I have taken the liberty to style Polycarp, possesses many peculiarities, some very remarkable, a more particular account of which will perhaps be given to you at some future day. I will merely remark here that, it differs very strikingly in the shape of the stalk, leaves, pods, quality and length of fibre of the cotton, from either of the other varieties. One of my neighbors says that, "it is the most beautiful cotton plant that he ever saw, and that he would like to cultivate it, if it were for its beauty only:" and another, after observing the vast number of bolls and squares upon it, "that it came up exactly to his idea of perfect cotton." This cotton has been put into the hands of *judges*, who pronounce it to possess the requisites of fine cotton, but express a doubt about its productiveness. Its strength is sufficient, its evenness is its best recommendation, its fibre finer and longer than the common cotton, but not in either respects equal to the Sea Island, and its color very good. It is, apparently, a green seed. We are told that for length of fibre and other qualities of the best cotton, the old Black Seed is preferred, but it does not produce enough to make it profitable. This then is the desideratum, to get a kind uniting the qualities of the finest with the necessary proclivity to *yield*. The Dr. speaks in another part of this letter of the necessity of trying this seed another year, in better hand, to learn whether it will be profitable to plant. If he finds its "vast number of bowls and squares" mature to a large size and open well, he will have occasion to congratulate himself on the result of his experiments. We bespeak a sample of the next season's product, if he meets success, with an account, at length, of his whole experiment. Will some correspondent who has the Chinese cotton, give us the result so far ascertained, of the trial now making with this plant.—*Southern Planter.*

The Cow-Pea.—Probably some of our planters do not attach sufficient importance to the cow-pea as a means of preserving the fertility of their land. The experience of our oldest planters proves that its cultivation is a matter of the first importance. Mr. Michael Cordy, of Bayou Sale, informs us, that his land has been under cultivation for twenty-eight or thirty years, and during the time it has deteriorated very little. He has devoted great attention to the cultivation of the cow-pea, which has been the principal means he has used for resuscitating his land. He informs us that he recently got from New Orleans a new species of pea which he considers far superior to the common cow-pea. He sows it half way between each hill of corn, when the latter is quite low, and it does not spread so fast as the cow-pea, leaving for a considerable time, plenty of room to work the corn. About the time the corn is ripe, it spreads most rapidly and luxuriantly, and yield

well. It makes most excellent fodder, and the pea is very fine for the table. The new pea will be found a most valuable acquisition by our planters. None of the Northern grasses, of which we hear so much, can compare with the pea for fertilizing our soil. What clover does for the Northern farmers, the pea does for us.—*Planter's Banner, La.*

Animal Manures.—Carcasses consist of bones, flesh, fat, and other soft parts. The flesh contains, according to chemical analysis, in 100,000 parts, on an average, 77,170 parts of water; 15,800 muscular fibre, vessels, and nerves; 1,900 cellular tissue; 2,200 albumen, and serum of blood; 1,800 osmazome, with a little lactite of soda, potash, and chloride of lime; 150 mucous matter; 900 phosphate of soda, and 80 phosphate of lime. The muscular fibre, vessels and nerves, the cellular tissue, albumen and serum, osmazome and mucous matter, are those substances of the flesh which contain abundance of nitrogen, sulphur, phosphorus, and chlorine, and possesses a high value as a manure. Of much less importance is the fat, which in its pure state consists only of carbon, hydrogen, and oxygen; and it would be still less worth if there were not the cellular tissue, in which the fat is contained, to which the manuring quality of the refuse of the tallow melter is to be ascribed.

The flesh of animals dying a natural death soon passes into a state of putrefaction, as it is not deficient in water, and it develops during that process a great quantity of ammonia, phosphuretted hydrogen, and some other putrid gases, not yet sufficiently known; if, therefore, nothing of these substances is to be lost, it must be, as soon as possible, mixed with matters which are able to receive and chemically bind the gases thus developed. In Belgium the flesh of dead animals, or such as have been killed on account of being diseased, is cut immediately into small pieces, which are divided over the field, and soon covered by ploughing them in. Against this procedure nothing can be said, provided the soil contains much humic acid, by which the developed ammonia can be chemically fixed. Still it is better to cut the flesh of carcasses in small pieces, and put it, with moist soil rich in humus, into a hole where it may rot, by which means all the ammonia will be chemically fixed. The bones also, which do not require to be bared of flesh, may be equally placed in the hole, and afterwards taken out and used by themselves. We generally find it stated that carcasses should be mixed up with quicklime, and thrown into a ditch, where they may decay; but this occasions a considerable loss of fertilizing materials, because the greatest portion of the nitrogen escapes. For if a portion of it combines with the oxygen of the atmospheric air, and forms nitric acid, which may enter into chemical combination with lime and ammonia, and so becomes nitrate of lime and ammonia; still most of the nitrogen combines with hydrogen, and escapes under the form of ammonia. If nitrogen is not to be wasted, no lime should be added, nor is it at all necessary, if the carcasses have been mixed with soil rich in humus.

The Entrails of dead animals are to be treated in the same way as the flesh, if they are to yield the greatest advantage as manures. After they have been frequently worked up with humus soil, and are properly decayed, they form an admirable top-dressing; but must always be used in small quantities, or they will make vegetation push too luxuriantly.—*Sprengel.*

To keep Sweet Potatoes.—Level a dry piece of earth, so as to form a circle of six feet in diameter; cover it with dry hay, and on this empty the potatoes until they form a cone of 4 or 5 feet high. Over this scatter dry grass, and over the grass, place corn stalks. Cover the whole with earth about a foot deep, without any opening. Insert in the ground, around the pile, four forked posts, on which rails may be placed to support boards to protect the pile from rain.—*Plant. Ban.*

NOTICES OF THE PRESS.

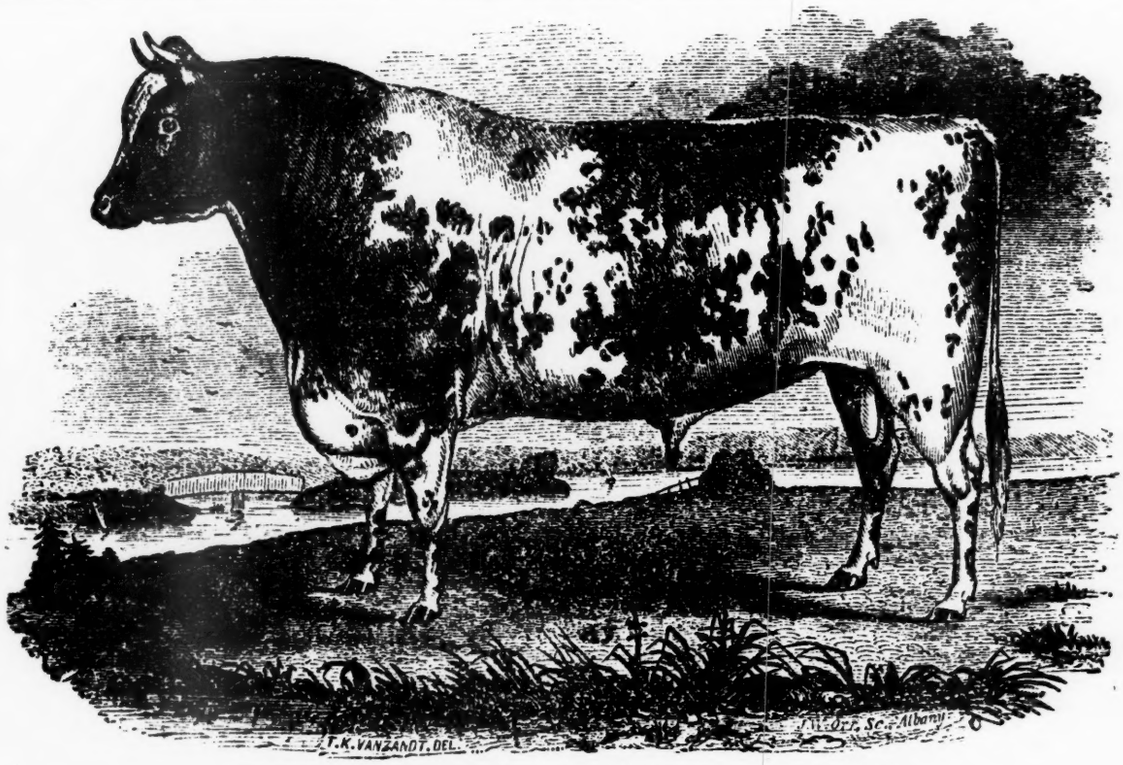
A Geological Report upon the Fourche Core and its immediate vicinity, by Byrd Powell, M. D., with a Geological Map, Little Rock, Arkansas.—We are indebted to W. W. Stevenson, Esq., for the above brief, though valuable report. The author has well set forth the money-saving benefits resulting from a knowledge of science, in the following remarks.

"Geology lies at the foundation of a large portion of those great improvements by which society is civilized and placed in advance of barbarism. The improvement of a country in canals, rail-roads, mining operations, and in the discovery of those natural productions which are indispensable to the arts of civilized society, must advance very slowly, empyrically, and expensively, unless guided by the lights of Geology.

"In Pennsylvania, at the Mauchchunk Coal Mines, a company lost, in one enterprize, $80,000, which could have been prevented by three hours' labor of a practical geologist; or, if the company had possessed such a knowledge of the science as should constitute a part of the education of every gentleman, the occurrence could not have happened. Blunders of equal magnitude, but not of equal expense, are committed, to my own knowledge, in every part of this country, in digging and boring for salt and fresh waters. It not unfrequently happens, furthermore, that articles, indispensable to domestic life, are imported, when, at the same time, they exist, perhaps, upon our own possessions. In confirmation of this remark, we have before us the fact, that roof slate has been freighted here from the north, while the same article exists in abundance within three miles of the city. It is also true that a comparatively fragile and decomposable sand-stone has been brought from Cincinnati to this place, for architectural purposes, when a granite of a more beautiful and enduring character, and admirably adapted to the same purpose, obtains in great abundance within four miles of the city. I think it probable, furthermore, that hydraulic lime has been shipped from Louisville to this place, when it might have been procured within the corporate limits of the city. Finally, the great abundance and variety of geological productions used in, and almost indispensable to, the arts of civilized society, which I have developed in a few weeks, and that, too, within a very small compass, ought to induce every young man who is receiving an education, and every gentleman of leisure, to devote a liberal portion of his time to this subject." We should be happy to increase these extracts did our limits permit.

Address delivered before the Ag. Soc. of Newcastle Co. Delaware, by Hon. Jas. M. Garnett, of Virginia.—We have been favored by the author with a copy of this valuable address, which is characterised by his usual sound and practical views. Few men are doing more for the advancement of an enlightened and profitable system of husbandry, than Judge Garnett. We regret that a want of room prevents our giving a portion of this address to our readers.

We are indebted to an unknown friend for the Constitution and Address of the Rensselaer Co. Ag'l. Society. Also, to Messrs. A. J. Downing & Co. of Newburgh, for a better and more systematised catalogue of the Fruits and Ornamental Trees and Plants of their Nursery, than we have before seen.



DUKE OF WELLINGTON, owned by Geo. Vail, Troy, N. Y.

PEDIGREE.—Duke of Wellington is a Roan Bull, bred by Thomas Bates, Esq. of Kirkleavington, Yorkshire, England, calved October 24, 1839, got by Short Tail, (2621,) Dam Oxford, having obtained the first prize for the best Short-horned Cow, open to all England, in July, 1839, given by the Royal Agricultural Society, by Duke of Cleaveland, (1937;) grand dam Matchem Cow by Matchem, (2281,) great grand dam by Young Wynyard, (2859,) sometimes called Young Wellington.—(Page 494 Coate's Herd Book.)

SHORT TAIL, (2,621), bred by Mr. Bates, got by Belvidere, (1,706,) dam Duchess, (XXXII,) by Second Hubback, (1,423,) g. dam Dutchess, (XIX.) by Second Hubback, (1,423,) g. g. dam Duchess, (XII.) by The Earl (646,) g. g. g. dam Duchess, (IV.) by Ketton (II.) g. g. g. g. dam Duchess, (I,) bred by Mr. C. Colling, by Comet, (155,) g. g. g. g. g. dam by Favorite, (252,) g. g. g. g. g. g. dam by Daisy Bull, (186,) g. g. g. g. g. g. g. dam by Favorite, (252,) g. g. g. g. g. g. g. g. dam by Hubback, (319,) g. g. g. g. g. g. g. g. g. dam (bought by Mr. C. Colling from Stanwix,) by Mr. James Brown's Red Bull (97.)

In a recent visit we made at the hospitable mansion of Mr. Vail, we understood him to say, that one of the two young bulls out of his beautiful cow Dutchess, imported from Mr. Bates, and got by the Duke of Wellington, was for sale.

EDITOR'S TABLE.

SALE OF SHORT HORNS *in England.*—It is refreshing, to turn from the meagre sales and small prices of pure bred animals in our country at some of the late Fairs, to those reported from England at the Ag'l Fairs during Sept. last, in the New Far. Journal. Notwithstanding these animals have been bred for so long a time, and the fact that there are thousands turned over to the shambles annually, the same spirit exists for sustaining and improving their breeds, that has ever been manifested among those enlightened breeders.

At Mr. Parkinson's sale of Short Horns, held 17th September, the average price for the entire lot exceeded $150 each. Those by Cossack, very young, exceeded $170 each; while a pair of twin heifers brought 675 dollars.

Mr. Smith, of West Rasen, sold his entire herd. The 2 yr. old bull Lord Adolphus Fairfax, by Sir Thomas F. sold for $275; and the 7 yr. old cow Nectarine, by Norfolk, the sire of Sir Thomas Fairfax, sold for $750. The average price was about $165 each. Four bulls, the get of Cossack, were lately sold for $1000 each.

300 *Sheep* were sold in lots of 10 each, at nearly $10 per head.

When we consider the extensive depression of the times, and the multiplicity of improved animals in England, together with the large lots of cattle, exceeding 100, these are encouraging prices. Let not our American breeders despair. We shall have remunerating times yet, for such as have choice animals. Breeders and consumers in this country, will yet open their eyes to the great advantages of improved stock, and such as carefully, and patiently, and intelligently continue their operations, will ere long meet the reward of their labor.

The New England Farmer.—We are greatly indebted to the editor of this valuable work, for the spontaneous greeting offered us in his last number, which he may be assured we cordially reciprocate. Twenty-one volumes of this well sustained paper, are a sufficient guarantee of its value and usefulness.

White Carrots, *as a field crop.*—We have elsewhere than in our paper, had frequent occasion to call attention to this valuable variety of roots, and we are glad to find in the N. E. Farmer, a notice which induces us again to speak on this subject.

It states that B. V. French, Esq., near Boston, Mass., raised this year over 22 tons per acre, on ground not particularly well prepared for roots. He attributes his success principally to *sub-soil plowing* this land, in the spring of 1841. In addition to its being proverbially a great yielder, it possesses another important advantage in deriving a great portion of its nutriment from the atmosphere, and the beet-like protrusion of its roots above the surface, render it much easier to gather than the ordinary carrot. We have cultivated them for years, and speak advisedly on the subject.

Mediterranean Wheat.—We see this variety of wheat is very much lauded of late, as being *proof against the fly, mildew, and rust.* Some who have raised it, however, inform us that they have not realized in its cultivation, all the advantages claimed for it, and that in these respects it is not better than many other kinds raised. We advise all who can try the experiment fairly and impartially, and at not too great expense for seed, to do so. "Prove all things, and hold fast that which is good," should be the motto of every intelligent farmer.

Prices of Long Wool.—We are told by wool dealers in this city, that the long wool from the Cotswold, Leicester, and Lincolnshire Sheep, is now worth in this market, 23 cents per pound. Attempts are about being made in the United States, for the manufacture of worsted stuffs from this wool. The large quantity now produced in this country, the requisite skill in manufacturing, and a protective tariff combined, will, it is hoped, make the experiment entirely successful.

Salt and other Condiments for Animals.—All domestic animals should be abundantly furnished with salt. A supply kept within their reach *at all times* is best. Their comfort, thrift, and health is essentially dependant on this. Horses and pigs should have ashes occasionally given them in their food, in addition, and the latter ought at all times, when confined in pens, to be supplied with charcoal, as, besides being a medicine, it is a cheap and valuable *food. Lime*, or *chalk*, which is another form of lime, may, with great advantage, be given to horses and cattle, or placed within their reach, so that they can use it as nature dictates. *Clay* is frequently sought for by horses and eaten with avidity, and we believe with decided benefit to their health. A fine stud we kept for some years, always ate it when within reach, and a heartier, healthier, or more easily kept horse we never saw.

Warm Shelter for Animals.—If our farmers knew the saving of *food*, which resulted from supplying their dumb beasts with warm, dry shelter during the winter, they would find their *interest* dictated a policy, which their *principle* urges in vain. If *humanity* fails to move them to a reform in this matter, we hope the *love of the all-engrossing dollar* may.

Soaking Corn for Horses.—There is a great saving in feeding horses with *soaked corn.* When fed dry, they do not masticate it well, and when it enters the stomach, the nutriment is not thoroughly extracted. After feeding on dry corn for some days, we have found that horses refuse it altogether, or take it only in very small quantities, owing to soreness in their teeth and gums, and when compelled by hunger to eat it, it is swallowed almost entirely whole, and of course with little or no benefit to them. By soaking it in the ear in two casks, to be fed out alternately, they will eat it freely, cob and all. Two bushels soaked, are worth three dry. If they refuse to eat at first, they should be starved to it, and when once accustomed to the soaked, they prefer it to the dry.

Comparative cost of Pork and Cotton.—The S. W. Farmer, in a long and careful calculation, estimates the cost of producing pork at rather less than one-half the cost of producing cotton, pound for pound. We like to see these estimates with the data on which they are founded; but we opine the calculation for pork raising, will be very much affected by the *kind of animal fed;* as the improved breeds might lessen the cost materially, while some of the *shovel noses*, would increase it to several times the cost of the cotton.

Eclipse.—*The celebrated American Horse Eclipse*, twenty-eight and a half years old the 24th of November, is now in full health and vigor, and for sale by Mr. Wm. Dodd, Georgetown, Ky. We are not aware of any well authenticated horse, that can boast as much at his age, and after undergoing so much service.

New Disease in Swine.—We have received an interesting and important letter from Dr. A. Campbell, of Middletown, Ohio, describing a disease which has lately been prevalent among swine in his neighborhood, and the treatment of a few cases, and are promised a more full detail hereafter. Dr. C. need not fear that the dignity or laurels of his profession will suffer in this or any other quarter, by attending to, and describing the disease of any of the animal creation, however humble. When the late distressing epidemic broke out in England among cattle, sheep and swine, the Royal Ag. Soc. thought it a subject worthy of appointing a special commission of the ablest and most experienced Veterinary Surgeons, to investigate and report upon it. Members also of the medical profession, and those too who stood high in it, volunteered much time and attention to the same subject in their respective neighborhoods.

After speaking of several losses sustained by Mr. Hendrickson, of Middletown, one of which was Royal Charlie, a fine boar pig by Windsor Castle, the very picture of his sire, and for which Mr. H. had repeatedly refused $50, being of enormous size and very fine in all his parts, he says, "When first attacked, they lose the use of their limbs, become as cold as a mass of ice, the tongue and mouth turn purple, and they die in from six to ten hours. They resemble precisely the cases of cholera that I often witnessed here in 1833 and 4, in the collapsed stage, and in the congestion of all the internal viscera, with an almost suspended circulation.

When Kenilworth was attacked, Mr. Hendrickson sent for me, and I went up immediately. I hope you will consider it no descent from professional dignity for an M. D., backed by some half dozen diplomas from distinguished Medical Societies, to doctor a pig. I was disposed to laugh at Mr. H. about his lamentations over the death of Royal Charlie, but when I came to see Kenilworth prostrated—a fallen giant—a Samson shorn of his locks, I could scarcely refrain from manifesting the same childish feeling. He was unable to rise, and I bled him under the tongue, rubbed with hot

soap-suds, gave him 12 oz. linseed oil, ½ dr. Cayenne pepper, 2 sc. spirits turpentine. This was on the 27th Oct., and the result was, that reaction was completely established. On the 30th he got up and walked across his lot, took some milk, and we supposed that he would certainly recover, but were disappointed by finding him lifeless on the following morning. When opened, his lungs were found to be perfectly filled with dark gummous blood, and an abscess formed containing a considerable quantity of matter. If the remedy could have been applied a little sooner, I think we should have saved him."

As a preventive to this disease, Dr. Campbell recommends occasionally a small quantity of sulphur with charcoal, or pearl ashes mixed in their food; that the stock should be housed if possible, at night, and be suffered to run out on dry ground through the day. Ashes we know to be a good preventive, or a little lye, and salt as a matter of course, mixed in their food.

American Flour.—It is asserted by one of the most eminent bakers in London, that American flour will absorb from 8 to 14 per cent. more, of its own weight of water in manufacturing it into bread or biscuit, than the English wheat. Mrs. Rumdell states in her "Domestic Cookery," that while 14 lbs. of American flour will make 21½ lbs. bread, the same quantity of English flour will produce but 18½ lbs. This fact will explain what we have said in another article in this No., on the subject of wheat. We have numerous specimens of English and American wheat of similar varieties, and the English is almost invariably a larger and plumper berry than the American. We attribute this to the longer time required for ripening in that cooler, damper climate, by which it absorbs and retains a larger quantity of water. Ours, on the contrary, in ripening under a dry, hot sun, evaporates a larger proportion of the water, and leaves the farina in a more condensed state; and when exposed again to moisture in cooking, it absorbs the additional quantity above stated. This is an important fact, of which the dealer and consumer should be fully aware.

We see our southern friends claim this quality exclusively for their own wheat, which is doubtless true in part, but not wholly in comparison with English. It is a well known and long established principle, other things being equal, that a warm and dry climate gives a richer grain than a cold moist one.

Cow Pea *as a fertilizer—a new variety.*—We call the attention of our Southern readers to a brief article from the Franklin Planter's Banner, La,. on the subject of introducing the Cow Pea extensively as an article of food, and as a fertilizer. Now is the time to commence and sustain a vigorous *system of improvement in their soils*, before they shall have been reduced by severe cropping. An ounce of prevention is better than a pound of cure.

Agricultural Fairs.—The notices and reports of the different Fairs for 1842 have crowded out much important matter from this number. But we have devoted a large space to them, as they are of a practical character, and therefore especially worthy the farmer's attention.

An important article on the subject of our Agricultural Exports is crowded out of our present number. It will appear in our next.

☞ Subscriptions to our work may be made to commence with the first of January next, and continue *for one year*, at the option of subscribers. The January number will be the 10th of the present volume, but as we stereotype the work, subscribers are at liberty to begin with such numbers as they choose. It is desirable that such as intend commencing with our next number should send in their subscriptions as early as possible.

Dimensions *of the thorough-bred Short Horn Heifer, about 5 years old, raised by Ed. Tonkins, Esq., of Gloucester Co., N. J., which took the first premium for fat cattle, at the Am. Institute Agricultural Show in October, 1842, open to the U. States.*

	Feet.	In.
Length of head	1	9
Girth of throat	3	2
Length from root of horn to pin bone	7	6
Do of neck to shoulder point	1	9
Do do and shoulder to place of girth	3	0
Girth	8	5½
Do of flank	8	6½
Width across hips or huckles	2	5
Do through round bone, or thurl, or after hip	1	11
Do do flank	1	10
Height to top of hips	5	0
Do do shoulders	5	0
Distance between fore knees inside, in usual position	1	2½
Depth between top of shoulder and brisket	3	4½
Width through shoulders	2	5
Girth of fore ancle		7½
Do hind do		9
From point of hip or huckle to pin bone	2	3
From hip or huckle to hock or gambril	3	7
From hip to shoulder blade.	2	9

Live weight *estimated* at about 3000 lbs.

Two Good Tenants Wanted, to go to the western part of this state, and take separate but adjoining farms, with a lot of improved stock. Unexceptionable testimonials as to character and capacity will be required, and a small amount of capital to invest in the stock and farming tools. To such as are every way qualified, the above offers a better inducement than can be found elsewhere. Address the editors of this paper.

FOR SALE.

A Full Blood SHORT HORN BULL, 3 years old 22d April last, bred by W. K. Townsend, Esq.. Conn. For particulars, inquire of the editors of Am. Agriculturist, or of the subscriber, at Mendham, Morris Co., N, J.

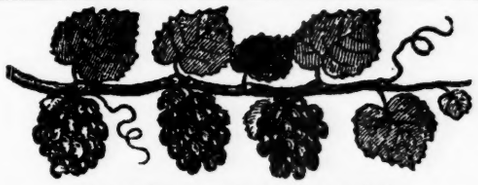
Nov. 1842. Charles Starr, Jr.

Wheat Sheaf FARM on Staten Island, for sale.

A recent domestic bereavement has induced the undersigned to offer his residence, on Staten Island, for sale. It is situated midway of the outer bay, on the sea shore, eight miles from the quarantine Ferry. three from that of Rossville, and equi-distant from two others, Seguine's Landing and Port Richmond.

The condition of the Farm—the extent, value, and practical usefulness of the improvements and its peculiar advantages, are sufficiently known. It has been improved in a way to render it susceptible of six farming divisions of thirty acres and upwards, each including an appropriate allotment of woodland—each division offering a moderately elevated building location. Terms to suit the purchaser, as the object is merely to change the investment for another susceptible of equal product.

W A. SEELY, 218 Fulton-st. N. York.



ISABELLA GRAPE VINES,

Of proper age for forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the vineyards at Croton Point, are now offered to the public. Those who may purchase will receive such instructions as will enable them to cultivate the Grape with entire success, (provided their locality is not too far north.) All communications, post paid, addressed to R. T. UNDERHILL, M. D. 400 Broadway, N. Y., will receive attention. He feels quite confident that he has so far ameliorated the character and habits of the grape vines in his vineyards and nurseries, by improved cultivation, pruning, &c., that they will generally ripen well and produce good fruit when planted in most of the Northern, all the Western, Middle and Southern States. October, 1842.

REVIEW OF THE MARKET.

Prices Current in New-York, November 23, 1842.

ASHES, Pots, per 100 lb.	$5 50	to	5 62
Pearls, do.	5 87½	..	—
BEESWAX, Yellow, per lb.	29	..	29½
COTTON, Louisiana, do.	6	..	10½
Upland, do.	5¾	..	9
Florida, do.	6	..	9
Alabama, do.	6	..	10
FEATHERS, American, live, per lb.	25	..	30
FLAX, American, per lb.	8	..	8½
FLOUR, Northern and Western, via Erie Canal, per bbl.	4 31	..	4 37
do. via N. Orleans,	4 25	..	4 31
Southern, per bbl.	4 37	..	5 50
RYE, per bbl.	3 25	..	3 50
MEAL, Corn, per bbl.	2 68	..	2 88
do. per hhd.	13 00	..	13 25
WHEAT, Western, per bushel,	80	..	90
Southern, do.	70	..	80
RYE, Northern, per bushel,	70	..	00
CORN, do. do.	54	..	57
Southern, do.	49	..	53
BARLEY, per bushel,	48	..	50
OATS, Northern, per bushel,	27	..	28
Southern, do.	20	..	23
PEAS, Field, do.	86	..	1 15
BEANS, White, per bushel,	1 21	..	1 43
CLOVER SEED, per lb.	6¾	..	7
TIMOTHY SEED, per tierce of 7 bu.	10 00	..	10 50
FLAX SEED, rough, do. do.	9 50	..	10 00
clean, do. do.	—	..	—
RICE, per 100 lb.	2 87	..	3 12
HEMP, Russia, per ton,	210 00		215 00
American, water rotted do.	280	..	—
HOPS, first sort, per lb.	10	..	12
LEAD, Pig, per lb.	3¼	..	3⅜
Sheet and Bar, per lb.	4½	..	5
OIL, Linseed, American, per gal.	85	..	90
PLASTER OF PARIS, first quality, per ton,	2 25	..	2 75
unground do.	1 81	..	1 88
BEEF Mess, per bbl.	6 00	..	6 50
Prime, do.	2 75	..	3 25
Cargo, do.	1 75	..	2 00
PORK, Mess, do.	7 50	..	9 50
Prime, do.	5 00	..	6 50
LARD, per lb.	6¾	..	7
BUTTER, best Table, per lb.	13	..	15
Western, good, per lb.	10	..	13
Shipping, do.	6	..	8
CHEESE, in boxes and casks, per lb.	5½	..	6½
HAMS, Smoked, per lb.	7	..	9
Pickled, do.	—	..	—
Shoulders, smoked	—	..	—
BEEF, Smoked, do.	6	..	7¼
SALT, Liverpool, ground, sack	—	..	1 47
do. fine, do.	1 62½	..	1 76
SUGAR, New Orleans, per lb.	5	..	6
TOBACCO, Virginia, do.	3	..	5
Kentucky, do.	2½	..	5
TALLOW, American, do.	8	..	8¼
WOOL, American Saxony fleece, per lb.	32	..	37½
Full blood Merino do. do.	28	..	30
Half to three-fourths do. do.	24	..	26
Native to half do. do.	18	..	22
SHEEP PELTS, each,	—	..	—
HAY, per 100lb.	56	..	62½
POTATOES, new, per bushel,	25	..	—
EGGS, per 100,	1 00		—

REMARKS.—The only material change we note, is a slight advance in *flour*, which will probably be sustained through the winter; and a decline in *provisions*. *Wool* is rather firm. We subjoin remarks from an English paper on our provisions abroad.

Liverpool and American Provision Market, Nov. 2.

CHEESE—In this article we are improving in prices, and good is freely taken at an advance of 3s to 4s per cwt. Our stock continues small, and is all expected to be taken off at the public sale 8th inst., where we think 55s or 56s will be obtained for very prime lots. BEEF—This article still moves very heavily, and may be said to be quite out of favor with the public, arising no doubt, from the old cause of bad curing and packing. Only 800 barrels have been taken since the 8th ult., for consumption. Fine Canada commands 45s per barrel, while the best U. States will not bring over 38s. PORK—Since our last we have had considerable sales of this article at improved rates, for the very best, which is decidedly getting into favor. Since the 8th ult., when the duty came down to 8s per cwt., there have been taken 3300 barrels for consumption, and about 600 barrels for export. Choice parcels are freely taken at 44s to 48s per barrel, duty paid, and one lot of very prime United States has commanded 54s duty paid. HAMS—Very prime are still in demand, and 51s per cwt. has been obtained. The demand for Wet Hams is very moderate, arising doubtless, from the very bad manner in which they are cut and cured. LARD—The demand for this article is still increasing. For very fine, 33s might be obtained and the Tallow Chandlers are now seeking the middling and inferior sorts at 35s, and will pay more.

New York Cattle Market—Nov. 21.

At Market, 1300 head of fresh cattle; 40 cows and calves, and 2500 sheep and lambs. PRICES—Beef Cattle were dull, and prices ranged full 25 cents per cwt. lower than last week, and we give $3 50 a $5 25 as the range at present; 275 left over. Cows and Calves—All at market but 8 sold at from $25 a $38. Sheep and Lambs—All at market sold at from $1 to $2 25 for lambs, and $1 25 to $4 25 for sheep.

Works pertaining to Agriculture for sale by Saxton & Miles, 205 Broadway.

Johnson's Elements of Agricultural Chemistry and Geology, 50 cents; Do. do. 1 vol. 12mo. $1; Gray's Botanical Text Book, $1 50; Lindley's Horticulture, $1 25; Gray's Agricultural Chemistry, $1 00; Downing's Landscape Gardening, $3 50; do. Cottage Residences, $2 50; Leibig's Organic Chemistry, &c. &c.

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MIDDLETOWN, BUTLER COUNTY, OHIO,

Is now prepared to fill orders for thorough-bred Berkshire Pigs, from the late imported boars Windsor Castle and Earl Craven, and twenty choice sows purchased of A. B. Allen, a part of his recent importation. Pigs in pairs from this superior stock will be furnished substantially caged and delivered on the canal at Middletown, or on board steamboat at Cincinnati, from $30 to $50, according to age and quality. Orders accompanied with cash, will always secure the preference.

ALSO—Pigs bred from the superb boar Kenilworth, of a stock of the largest and finest kinds of white hogs in England, also imported by Mr. Allen last October, crossed on the splendid large white Miami hogs of this country. The Miamis have been long noted for their large sizes. Animals of this breed have occasionally come up to the enormous weights of 1200 and 1400 lbs., and it is believed that the cross of Kenilworth on them, will easily attain the weights of 700 to 1000 lbs. at 18 months and two years old, if well fatted. Pigs of this cross $25 per pair, caged and delivered as above. Refer to the editors of this paper.

ORCHARD GRASS SEED,

Of the first quality, this year's growth. Orders received at the Office of the Am Agriculturist, where a sample may be seen.

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